

# American Aviation

The Independent Voice of American Aeronautics

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## Fortnightly Review

### Making Hay

THE future of U. S. aviation in South America is not an isolated problem. Everything that pertains to aviation is inextricably bound up in international relations and international economics. It is impossible to consider aviation's future picture in South America without also considering the broad picture of political relationships and general trade.

Much has been said within the past year of the great future market for U. S. aviation in the neighboring countries to the south. It is easy to look at a map and conjure up fond hopes of potential plane sales and increased scheduled air services, but the bald fact remains that the future of U. S. aviation to the south is in direct ratio to general economics and international relations.

Unless the United States as a whole and as a government tackles the South American problem in a realistic manner, and in the very near future, the destiny of U. S. aviation will not be so idealistic as it might be.

The American press has had much to say of so-called Fifth Column activities in South America on the part of Germans and Italians. But while there is no doubt of German espionage systems at work in South America, there seems to be a complete lack of understanding in the United States of the real problems in the South American countries, and of the colossal failure of the United States to carry out in practice what it preaches in the Good Neighbor policy. We can do all the talking we want to about Good Neighbors, but unless we actually carry the words into action we are only kidding ourselves. We certainly aren't kidding the South Americans.

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## NASAO Criticizes Curtailment of Civil Aviation on Airports

### NEW ROUTES OPEN; TOTAL 1,536 MILES

Penn-Central, Mid-Continent, Braniff  
Start Service on 4 Lines Nov. 1

A substantial increase in U. S. domestic airline route mileage was to be effected Nov. 1, as this issue went to press, with inauguration of mail-passenger-express service by three airlines on four new routes.

The routes, which include Pennsylvania-Central Airlines' 503-mile Norfolk-Knoxville, Braniff's 231-mile Amarillo-Oklahoma City, and Mid-Continent's 697-mile Twin Cities-Kansas City, Des Moines-St. Louis and 105-mile Bismarck-Minot, increase airline mileage by 1,536 miles.

Penn-Central's new route increases the company's mileage to over 2,735. Application for the line was filed with the Civil Aeronautics Board on May 18, 1939. PCA asked for Norfolk-Cincinnati, but the CAB has deferred its decision on the Knoxville-Cincinnati segment.

Mid-Continent's two lines increase its mileage from 1,114 to 1,916, a gain of over 70%. The company filed application for the Twin Cities-Kansas City, Des Moines-St. Louis route on Aug. 23,

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### Opens New Route



C. Bedell Monroe  
President of Pennsylvania-Central Airlines which is opening its new 503-mile Norfolk-Knoxville route on Nov. 1. (See special material on pages 2, 3, 4, 5, 6, 7).

### Panagra Institutes Deferred Rate for Forty Tons of Express

(By air mail from Buenos Aires)—What is believed to be the first air express deal on the Pan American Airways system offering a deferred rate has been negotiated by Panagra at the Buenos Aires office involving the shipment of 40 tons of candy from a large candy manufacturing establishment in Cordoba, Argentina, to Buenos Aires. From now on until the shipment is completed, every Panagra plane leaving Cordoba for Buenos Aires will be filled to the load limit, the candy occupying all available space over the normal passenger, mail and regular express load.

Deferred rates have been in effect for many years on TACA in Central America and on certain other lines specializing in freight. If a plane is already filled to the load limit, the deferred shipment waits until there is space. It not only provides one

means of filling up planes, but it provides the shipper with a cheaper rate on a "space available" basis.

Panagra established a special rate of five cents per pound for the candy shipment. A study of plane loads eastbound from Cordoba revealed that there were anywhere from 37 to 400 kilograms of weight available under the load limit per trip. While the five cent per pound rate is very low, the additional income of \$2,000 is warmly welcomed, since the space on the plane is available and candy could not be shipped under any circumstances at regular air express rates.

The deal was negotiated by Sylvester J. "Spec" Roll, general manager of Cia. de Aviacion Pan American Argentina, S. A., Pan American's company for Argentina which handles both Pan American and Pan Ameri-

(Turn to page 4, col. 1)

### Questions Value of CTPT; Advocates Separate Air Force

CRITICIZING what is termed the "current military trend to curtail permanently or temporarily eliminate civil aviation on certain civil airports of this nation," the National Association of State Aviation Officials, at its 10th annual convention, held at Louisville, Ky., Oct. 17-19, urged the U. S. military services to proceed at once to the establishment of sufficient military airports to return to civil aviation "the full and unrestricted use" of civil airports at the earliest possible moment.

The state aviation officials recommended that the CAA raise the maximum age limits of the Civilian Pilot Training Program sufficiently to admit an increasing number of qualified citizens of non-college as well as college groups.

They also favored establishment of "a separate and distinct air force with Cabinet representation" and went on record as opposing any attempt to tie aviation to any other forms of transportation.

The airport resolution, which was sent by wire to President Roosevelt, was adopted after the convention heard Maj. A. B. McMullen, chief of the CAA's airport section, predict further curtailment of civil aviation, particularly flight training, at many airports.

"Whereas the development of airports throughout this nation, until very recently, has been accomplished only through the tireless struggle of civilian aviation personnel against the inertia of the public consciousness and the national leadership; and

"Whereas this airport development has been planned and prosecuted primarily to meet the needs of civil aviation; and

"Whereas these facilities are patently available for normal military use at all times, and for exclusive military use in time of national emergency; and

"Whereas no such national emergency has been declared which would justify nullifying the civil value of civil airports; and

"Whereas civil aviation is still the backbone of aerial national defense, and as such should be encouraged and

(Turn to page 15, col. 1)

# Pennsylvania-Central Airlines

## GREETES THE SOUTH



Pennsylvania-Central Airlines inaugurates new air service . . . air mail, passenger and air express . . . between Norfolk and Knoxville. Fast and economical service with luxurious twin-engined Boeing airliners.



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## 1st Class Mail by Air is Best Means for Training Pilots, Rickenbacker Says

Carriage of all first class mail by air and the establishment of an extensive feeder system are the best means for training pilots for national defense purposes, Capt. Eddie Rickenbacker, president of Eastern Air Lines, told the 10th annual convention of the National Association of State Aviation Officials in Louisville on Oct. 17.

If it had not been for the "lack of leadership in Washington" the airlines would be carrying first class mail today, he said, adding that he believed such a system would be established in less than three years. The system would need 10,000 planes and would furnish 40,000 pilots and 40,000 co-pilots, he said.

CAA Civilian Pilot Training Program graduates are not pilots and are nothing more than "fledglings," Capt. Rickenbacker said, expressing the opinion that the CAA program was fundamentally sound but did not go far enough. First class mail by air plus an extensive feeder system would give CPTP students adequate training, he stated. Students could first be put on a daylight feeder mail route, then on a night route, then be shifted to transport service, after which they would have an adequate number of hours for military work, he explained.

Capt. Rickenbacker predicted that in the future there will be airports for passengers only, additional ones for mail and express and others for private operations. The tricycle landing gear will simplify airport problems, he said.

## Export Asks CAB to Approve TACA Deal

American Export Airlines on Oct. 19 filed application with the Civil Aeronautics Board for approval of its Oct. 1 purchase of TACA, Central American Airline.

Either TACA or a wholly-owned subsidiary organized in Guatemala will own the assets and conduct the air transportation operations at present being conducted in Guatemala under the name TACA, the application states.

It also points out that TACA owns all the stock of Transportes Aereos Centro Americanos, S. A., a Honduran corporation which has been conducting air transportation in Honduras and between points in Honduras and British Honduras, with a stop in Guatemala; all the stock of Compania Nacional Taca de Nicaragua, which operates in Nicaragua; and all the stock of Compania de Transportes Aereos Centro Americanos de Costa Rica, which operates in Costa Rica and between that country and Panama.

TACA also owns 196 of the 200 shares of TACA, S. A., a corporation of El Salvador which conducts air transportation between that country, Honduras, Nicaragua and Costa Rica.

## Canadian Colonial Case to Be Tried

The question as to whether Canadian Colonial Airways, Inc., can operate an intrastate New York-Niagara Falls route without a CAB certificate of convenience and necessity will be decided after a trial, rather than on affidavits, according to Judge Alfred C. Cox of the U. S. District Court for the Southern District of New York. The CAB had requested the Court to grant an injunction compelling CCA to cease operating the service.

"When the motion for an injunction was argued, I was inclined to think that only a question of law was involved," Judge Cox said, "I have now had an opportunity to examine the record, and find that there are some disputed facts which I hesitate to determine on affidavits. The case is one of considerable importance, and I feel that it can better be presented after a trial than on a motion. It is my understanding that both sides are anxious for such a trial, and I shall therefore recommend to Judge Knox that the motion for a preference be granted. In the meantime, I shall take no action on the motion for an injunction."

## New AE Official



**Durston G. Richardson**  
Newly elected vice-president in charge of operations of American Export Airlines Inc., newest entry into trans-Atlantic routes.

## Airlines to Stay on Job in Case of War

The plan of the War Dept. is to have "every airline stay on the job where it is" and not to abolish any schedules, according to Col. Edgar S. Gorrell, president of the Air Transport Association of America.

Plans have been formulated, Col. Gorrell said, to use every airline plane in the U. S. in case of extreme emergency. In such case, they would be used to transport troops, mechanics, supplies, etc., to danger spots, he explained, adding that they would then be put back on their regular routes. In an emergency, all planes could be commandeered in about eight hours, he said.

Col. Gorrell also stated that he opposed any amendment to the Civil Aeronautics Act which would write wartime powers into that Act. He indicated such amendments had already been written, that he had seen the re-draft, and that it was "rotten." He did not state whether there was any intention of introducing such re-draft in Congress or whether it was an emergency precaution.

## Life Insurance Liberalized

Removal of all restrictions on air travel in the U. S. and acceptance of business at standard rates with passengers using regularly established service of airlines has been formally instituted by Pacific Mutual Life Insurance Co., Los Angeles, Cal. Company indicates that it has during the last four years in effect followed this practice without official announcement.

Equitable Life Assurance Society of the U. S., and Mutual Life Insurance Co. of New York have also dropped air travel restrictions.

## Pennsylvania-Central Continues Expansion; Opens Norfolk-Knoxville

Company Operates Over 2,735 Route-Miles, Serving 26 Cities in 10 States; Started as 127-Mile Line

WITH the opening on Nov. 1 of its new 503-mile mail-passenger-property route between Norfolk and Knoxville, Pennsylvania-Central Airlines, whose predecessor in 1927 operated only the 127-mile route between Pittsburgh and Cleveland, serving two cities in two states, will be operating more than 2,735 route miles in 10 states into and from 26 cities.

PCA is at present the fifth largest airline in the U. S. From the standpoint of passengers carried, the company is also fifth, having transported 122,303 revenue passengers in 1939. Through September of this year, passengers traffic was 77% ahead of 1939.

PCA was founded by Clifford Ball, one of the pioneer air mail operators, who flew the mail between Pittsburgh and Cleveland, 127 miles, in OX5 Waco planes. The company at that time consisted of two pilots and one pilot-mechanic, an owner-manager, two mechanics, a traffic solicitor and a bookkeeper. Today PCA employs more than 650 persons and has 82 pilots on its staff.

After a year of flying the mail, passenger service was added. The first flight was made on Apr. 28, 1928, when four passengers were carried from Pittsburgh to Cleveland in a Fairchild FC2.

In 1929, with Pilot Bud Baker at the controls of a Fairchild 71, the company expanded its service into Washington, marking the first time that passengers were carried on a scheduled airline over the Allegheny Mountains.

The Cleveland-Pittsburgh air mail route emerged as Pennsylvania Air Lines Inc. in 1930. At that time it was operating one round trip by day between Washington, Pittsburgh and Cleveland, 370 miles, using four and six-place single-engine cabin planes.

In June 1931 a fleet of tri-motored Stinsons, equipped with radio and modern instruments, was purchased, and air mail service was extended from Pittsburgh to Washington in the same month.

## Buys Fords in 1933

Early in 1933, a fleet of tri-motored Fords was purchased, and co-pilots were employed. During that year, passenger traffic rose to 13,500 and the annual mileage neared the million mark.

Cancellation of the air mail contracts in Feb. 1934 halted Pennsylvania's operations, and when new

contracts were awarded, Central Airlines received the Washington-Detroit air mail route. This started one of the best-known periods of competition in the industry.

Refusing to be frozen out, Pennsylvania continued to operate the route as a passenger-express line only, paralleling Central. Simultaneously, the former company bought out Kohler Aviation and obtained a Detroit-Grand Rapids-Milwaukee route, for which it obtained a mail contract.

Competition increased on the route. PAL ran ahead for awhile with the more popular Fords. Then Central added Fords and PAL switched to Boeing 247's. Washington-Detroit rates were well below rail-plus-Pullman charges. Repeated efforts at consolidation had fallen down, each failure being the signal for a new outburst of rivalry.

Finally, however, a consolidation was effected and Pennsylvania-Central Airlines emerged as the operating company.

In Oct. 1937 PCA began a mail-passenger-express service between Washington and Buffalo via Baltimore, Harrisburg and Williamsport, and in Mar. 1938 Buffalo and Baltimore were linked with Pittsburgh. Following this, extensions to Norfolk from Washington and from Grand Rapids into Chicago were inaugurated. Also, in July 1938, Detroit and Sault Ste. Marie were connected, and on Oct. 9 of this year a seasonal route between Grand Rapids and Traverse City was opened.

The Norfolk-Knoxville route will serve Rocky Mount, Raleigh and Greensboro-High Point, all in North Carolina. Service to Asheville-Hendersonville will be offered later, pending airport improvements. The route will be opened with Boeing 247-D equipment, and it is expected that Douglas DC-3's will be used next year.

PCA had also requested a Knoxville-Cincinnati line, but the CAB stated that it was deferring its decision on that segment.

The company has on file with the CAB applications for the following new routes: Pittsburgh-Birmingham - Atlanta, Atlanta - Brunswick, Buffalo-Toronto, Baltimore-Atlantic City-Philadelphia-Newark, and Atlantic City-Charleston. It also has indicated its intention to file for a Pittsburgh-Cincinnati service.

## New Air Link



Map shows the new 503-mile mail-passenger-express route being opened by Pennsylvania-Central Airlines on Nov. 1. Service to and from Asheville will not be inaugurated until airport improvements are completed.

## Flying Progress

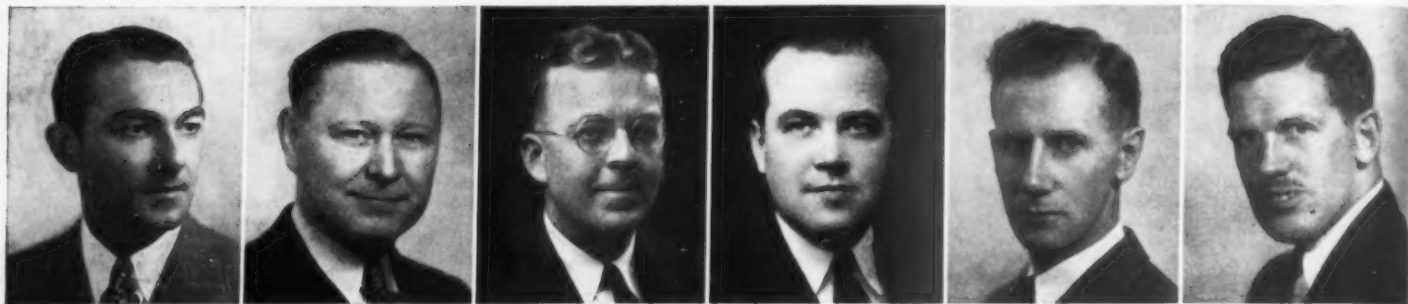
Marquette 798  
TWA 787

That's the 1940 score on revenue passengers carried over Marquette Airlines' Detroit-St. Louis route up to Sept. 1, only Marquette's 11 pay passenger traffic edge was accumulated from Jan. 1 to Aug. 14, against TWA's traffic for last half of August.

During first half of August Marquette served 85 revenue passengers.

TWA began operating the 564-mile run with Douglas transports, Aug. 15 one round trip daily St. Louis-Cincinnati-Detroit, and two daily Cincinnati-Dayton-Detroit. Marquette service provided four trips weekly with tri-motored Stinsons.

## Pennsylvania-Central Officers



Henry

Harris

Lochiel

Crawford

O'Donovan

Carmichael

From left to right are the executives of Pennsylvania-Central Airlines Corp.: James D. Henry, assistant to the president. Luther Harris, vice president of engineering and maintenance. Raymond G. Lochiel, treasurer and comptroller.

Frederick R. Crawford, executive vice president and secretary. J. J. O'Donovan, vice president. J. H. Carmichael, vice president of operations. (All photos by Parry, Pittsburgh).

## Panagra

(Continued from page 1)

can-Grace at this important junction. Prominent in the picture also is George Smith, general sales manager who came to Buenos Aires six months ago from Panagra's general base at Lima, Peru.

Of special benefit to Panagra is the publicity tie-up with the candy company. The candy is a special kind

made only in Cordoba, but it is immensely popular throughout Argentina. Rich and poor alike buy it. On each box will appear a sticker telling the purchaser that the candy has been brought to Buenos Aires by air—from manufacturer to purchaser in one day. Panagra is prominently mentioned.

It is probable that other deferred rate shipments will be negotiated, although this practice is new for PAA. The only similar instance is the hand-

ling of trans-Andine baggage as air express instead of excess baggage for the convenience of steamer passengers who come down one coast, fly between Buenos Aires and Santiago, Chile, via Panagra, and return to the U. S. by boat. Steamer passengers invariably have more baggage than through air passengers, hence the air journey across South America presented a problem until the air express rate was worked out to save passengers from high excess baggage charges.

## They Fly the Capital Fleet



Top figures in the flight personnel of Pennsylvania-Central Airlines are shown here.

In the top row, left to right: C. A. Lupole, chief flight dispatcher; Capt. H. Stark; Capt. H. L. "Pop" Musile; Capt. C. P. Northrop; Capt. S. A. "Sam" Carson; B. O. Smith, superintendent of radio maintenance.

Second row: Capt. M. C. "Fappy" Garlow; one of PCA's 21-passenger Douglas DC-3 transports; Capt. J. H.

"Jack" Neale.

Third row: Capt. A. J. "Duke" Silmon; Capt. H. J. "Doc" Reid; Capt. H. C. Ross; Capt. A. E. "Al" Wilson; Capt. R. L. "Bud" Baker.

Fourth row: Capt. Muri Estes, chief pilot, Washington; Capt. W. S. "Rosie" Rosenberger; Capt. R. H. "Bat" Taylor; Capt. J. A. "Al" Brooks; Capt. H. L. "Harry" Smith; Capt. C. W. "Chuck" Weiblen, chief pilot, Detroit.

## PCA Extends Douglas DC-3 Service on Three Routes

With replacement of Boeing 247-D aircraft by New Douglas DC-3's on three routes Oct. 15, Pennsylvania-Central Airlines has become an entirely Douglas-operated system with the exception of the Detroit-Sault Ste. Marie segment and the new Norfolk-to-Knoxville division. The three routes added to the Capital Fleet service are Pittsburgh-Buffalo, Buffalo-Washington, and Pittsburgh-Baltimore.

Since June, the company has sold six of its 12 Boeing 247-D's to Charles H. Babb, aircraft broker, for re-sale to the Canadian government for use in training military pilots in operation of multi-engine equipment.

## PCA Appoints 10 Station Managers and Assistants

R. W. Hardesty, chief of stations for Pennsylvania-Central Airlines, has announced the appointment of the following new station managers and assistants at terminals served by PCA:

R. P. Brinkley, manager, Detroit. P. S. Reid, manager, Milwaukee. E. J. Geiger, manager, Pittsburgh. J. L. Bubna, manager, Chicago. W. B. Phelan, manager, Buffalo. R. F. Scholze, manager, Harrisburg. H. Dawson, manager, Williamsport. T. M. Beavers, assistant, Washington. J. H. Murphy, assistant, Detroit. F. Vrnak, assistant, Chicago.

## Penn-Central Completes Link in Teletype System

To meet the demand for speedier communications west of Detroit, Pennsylvania-Central Airlines has installed teletype service between Detroit, Lansing, Grand Rapids, Muskegon, Chicago and Milwaukee.

This new network between the key western division stations of PCA ties in at Detroit with the established teletype service between Detroit and Washington.

James Roth, superintendent of PCA's communications, stated that the new teletype system will greatly facilitate the conduct of routine reservations and other messages that were previously handled by other communication methods.

## Carmichael Surveys Route

Survey trips over Pennsylvania-Central Airlines' Norfolk-Knoxville route were made by Capt. J. H. Carmichael, vice president, who completed the check-up work in mid-October.

## Statistical

The statistical department of Pennsylvania-Central Airlines has announced that during 1940 the airline will consume a total of 2,431,717 gallons of gasoline. This figure is based on the amount consumed by PCA planes during the first 10 months of this year. With this amount of gasoline the average motorist could make 1,945 trips around the world at the Equator.



## Division Chiefs



Chiefs of various divisions of Pennsylvania-Central Airlines' organization are shown; from left to right:

R. W. Hardesty, chief of stations.  
Mary E. Nutter, chief, women's division, traffic department.  
J. F. Roth, chief of communications.  
J. P. Kurty, purchasing agent.

## NW-KX Schedules

Effective Nov. 1, mail, passenger and express service will be inaugurated by Pennsylvania-Central Airlines on the Norfolk-Knoxville route (AM-51) as follows:

131 Daily	Effective Nov. 1st	132 Daily
7:20a	Lv. Norfolk (EST) .....Ar.	4:46p
8:07a	Ar. Rocky Mount .....Lv.	4:02p
8:17a	Lv. Rocky Mount .....Ar.	3:52p
8:40a	Ar. Raleigh .....Lv.	3:31p
8:43a	Lv. Raleigh .....Ar.	3:28p
9:18a	Ar. Greensboro .....Lv.	3:15p
9:38a	Lv. Greensboro (EST) .....Ar.	2:48p
10:30a	Lv. Asheville .....Lv.	11:38a
10:30a	Ar. Knoxville (EST) .....Lv.	2:47p
2479	Equipment	2479

\*Stop at Asheville deferred pending airport improvements.

## Derby Added to Staff

Miss Eleanor Derby has been added to the publicity and advertising department staff of Pennsylvania-Central Airlines at Pittsburgh.

## Markey Directs Training

W. D. Markey has joined the operations department of Pennsylvania-Central Airlines in Pittsburgh and will be in charge of training operations personnel.

## 'Minister of Propaganda'

George Mason, director of publicity for Pennsylvania-Central Airlines, who formerly worked in the publicity department of United Air Lines, is PCA's self-styled "minister of propaganda." Mason joined the line at Pittsburgh last year.



Mason

## Chief Meteorologist

Daniel O'Keefe, chief meteorologist of Pennsylvania-Central Airlines since Sept. 29, 1939, is a graduate of New York University's air transport engineering course. He formerly was associated with United Air Lines.



O'Keefe

## Mohan, McGarry and Cramer Get New PCA D. T. M. Posts in Route Extension



Mohan

Pennsylvania-Central Airlines' staff of district traffic managers has been expanded to 13 with the appointment of three new d.t.m.'s who will be assigned to the new Norfolk-Knoxville route. These new men are: C. J. Mohan at Knoxville; W. E. McGarry at Greensboro-High Point and R. H. Cramer at Raleigh. V. K. Stephens has been serving as d.t.m. at Norfolk, southern terminus of the line prior to opening of the new route.

Mohan is former assistant d.t.m. in Washington, having worked with Don A. Duff in the capital city since July 1938. He is a graduate of the Wharton School and of the University of Pennsylvania.

Station managers for the new route will be Max Chennault at Rocky Mount; Larry Frost at Raleigh, George Conroy at Greensboro-High Point, and J. W. Stout Jr. at Knoxville.

Other PCA d.t.m.'s, in addition to Duff, Stephens and the three new appointees, are Morris Knowles Jr. at Pittsburgh; C. J. Miller at Cleveland; F. C. Klein at Detroit; C. P. Shropshire at Grand Rapids, Mich.; C. P. Hunt at Milwaukee; H. E. Kennedy at Chicago; F. R. Clemens at Baltimore, and W. I. Gates, acting d.t.m. at Buffalo.

## Air Express Ads Extended

The Air Express Advertising Committee, in conjunction with the Air Division of the Railway Express Agency, has prepared an advertising program which for the first time will use newspaper space in cities which do not have airports but have air-rail service.

## New Station Managers



Frost

Stout

## New Routes

(Continued from page 1)

1938, the day upon which the Civil Aeronautics Authority, now CAB, came into existence. The Bismarck-Minot, establishment of which was mandatory under the Civil Aeronautics Act, was applied for on Nov. 17, 1939. The Post Office Dept. on two occasions tried to establish this route under the competitive bidding system, but received no bids.

MCA, under the leadership of Thomas Fortune Ryan III, has expanded its routes more than any other domestic airline.

The Amarillo-Oklahoma City route increases Braniff's route mileage from about 2,400 to over 2,600. The company, together with Trans-Southern Airlines, applied for an Amarillo-Atlantic route, but the CAB stated that only Amarillo-Oklahoma City was required by the public convenience and necessity, and awarded it to Braniff. The company filed application on Feb. 28, 1939.

## The AIR TRANSPORTATION SECTION of AMERICAN AVIATION

### Is Preferred Reading by Nine Out Of Ten Airline Men

★ We have built this department of the magazine up around the needs and interests of air transport people.



★ Our sources of information reach from coast to coast and cover air transport from top to bottom, from every angle and from every viewpoint.

★ Our men are experts in their field. They know how to dig up the airline news and how to interpret it for you.



★ AMERICAN AVIATION is published twice a month, keeping out in front of all developments instead of picking them up after they are old stuff to the industry.

★ If you are in air transportation one way or another and know that it's a part of your job to know what is happening.....there just isn't any other way of getting most of the information that AMERICAN AVIATION gives you.

## AMERICAN AVIATION ASSOCIATES, INC.

Earle Bldg., Washington, D. C.

AMERICAN AVIATION MAGAZINE ★ AMERICAN AVIATION DAILY ★ AMERICAN AVIATION DIRECTORY ★ AMERICAN AVIATION SERVICE BUREAU



## The man who'd flown a hundred thousand miles



AS their great Mainliner soared along, he told the First Timer what he'd learned about United in his hundred thousand miles as a passenger . . .

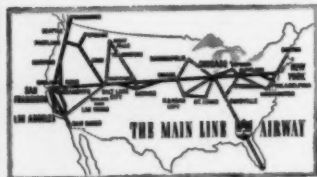
He told how United's Main Line Airway was selected by the Government twenty years ago for the first coast-to-coast air-mail flight, and how beacons, weather-service—nearly every important airway improvement—had been developed on this route . . .

About United's 175,000,000 miles of flying experience—mil-

lions more than any other airline . . . how United's conservative operating policies reflected that experience . . . and about United's years of research which have given air transportation two-way, plane-ground radio; airport localizer beams and other important aids. . .

He mentioned the many Mainliner service features originated by United, such as stewardess service and delicious hot meals aloft . . . and the unfailing courtesy and competence of United's employees.

In short, he told his First Timer neighbor the things people want to know about an airline . . . the things that will make any flight on United's nation-wide system an enjoyable experience.



For reservations or information, call travel agents, hotels or

# UNITED AIR LINES

20th Anniversary of the Main Line Airway

## Airlines Oppose Examiner's Report Recommending Dixie Route Award

In reply to the charge that Dixie Airlines, the new company recommended by CAB examiners for a proposed Pittsburgh-Birmingham route, has no assurance of getting aircraft equipment necessary for operation, William I. Denning, Dixie counsel, in oral argument before the Civil Aeronautics Board Oct. 17 declared that Lockheed Aircraft Corp. has informed the airline to expect delivery of five Lodestars in Jan. 1941.

Further, Denning reported that the company has received sufficient applications from experienced flight and ground personnel to permit inauguration of the new service in short time, if the certificate is granted. Initial payment of \$10,000, he said, has been made on the Lodestar equipment.

Appearing with Dixie to take exceptions to the advisory report of Examiners Francis W. Brown and Thomas Wrenn issued Sept. 7 (AMERICAN AVIATION Sept. 15, p. 22), which also favored an Augusta-Savannah extension for Delta Air Corp., were Delta, Pennsylvania-Central Airlines, Southern Air Lines, and Eastern Air Lines, whose applications for new service in the southeast were denied by the examiners.

G. Franklin Ludington, PCA counsel, told the Board that granting of Pittsburgh-Birmingham to Dixie would freeze PCA expansion in the north and Delta expansion in the south, leaving Dixie itself a small carrier without chance to grow, in effect preventing any other carrier from competing effectively in the southeast with Eastern Air Lines.

Similar position was taken by Seth Richardson for Delta who declared that basic to the examiners' findings is the notion that where monopoly exists it must be protected. Despite a complete lack of air competition from New Orleans to Cincinnati and the lack of direct air service Atlanta-Cincinnati, the examiners advised that Delta be denied its applications to serve those natural trade routes directly, Richardson pointed out.

As a new company Dixie has not proved its fitness as an air carrier and has nothing to offer the aviation industry except additional capital, Ludington argued, in answer to which Denning asked whether every new carrier should be expected to have a hangar full of planes and pilots before applying for a route.

E. Smythe Gambrell, Eastern counsel, urging the Board to reverse the examiners' opinion that Eastern should be denied its request for a Birmingham stop on AM-5, insisted that his company could render the Birmingham service without cost to the government, with no detriment to Delta whose route between Atlanta and Birmingham would be paralleled, with profit to Eastern, and commercial benefits to the City of Birmingham. He described Eastern as willing to accept a restriction forbidding transportation of local passengers between Atlanta and Birmingham so as to protect Delta's interest in that service.

Delta would not lose because of the Eastern service, he said, since it could

drop schedules now operated unprofitably. Gambrell estimated that inclusion of Birmingham would bring Eastern \$50,000-\$100,000 yearly, mail pay excluded.

## National Defense Boon

### To Air Express Shipments

Utilization of the cargo service of the airlines in the national preparedness program is reflected in the large number of emergency shipments, including airplane parts, factory replacements and machine tool movements in connection with Army and Navy orders, according to C. P. Graddick, director of express for United Air Lines.

The airlines are prepared to move substantially more military items when the production gets into volume, said Graddick, who pointed out that U. S. airlines are now operating 300 twin-engine passenger planes each of which has from 500 to 2,000 lbs. of cargo capacity.

## Duff, PCA's D. T. M. for Capital, Will Be Assisted by Ferris

Donald A. Duff, district traffic manager for Pennsylvania Central Airlines in Washington, will be assisted by



Dillon J. Ferris who replaces C. J. Mohan, transferred to Knoxville, Tenn., in connection with the opening of PCA's new route between that point and Norfolk, Va.

Mohan, who has been serving in Washington as assistant district traffic manager, received all of his airline training from Duff who has instituted many new sales and publicity ideas during his term of service with PCA in Washington.

Duff joined Pittsburgh Aviation Industries Corp. in 1930, the company which subsequently purchased Pennsylvania Airlines Inc., the pioneer operator of the Pittsburgh-Cleveland air mail line. In 1931 he became Pittsburgh district traffic manager of Pennsylvania Airlines, and in 1932 was transferred to Harrisburg, Pa., as manager of Harrisburg Airport which was operated at that time by Pittsburgh Aviation Industries.

When Pennsylvania Airlines extended its route to Milwaukee by way of Detroit and Grand Rapids, Duff was named traffic manager for the new territory. In May 1935 he was appointed advertising manager for the line, becoming director of advertising and sales in Nov. 1935, following the consolidation of Pennsylvania and Central Airlines.

Early in October of 1937 Duff was named traffic manager of the Washington-Buffalo division of PCA. In July of the following year he was made Washington district traffic manager.

Duff now has had about 10 years experience in the air transport industry.

Ferris, formerly in the reservations department of PCA at Washington, becomes Duff's assistant following his employment by the line in Mar. 1940. Prior to that time he was with American, Central and TWA.



Ferris

## In Charge of Traffic



At left is J. O. Urquhart who is assistant to J. J. O'Donovan, vice-president in charge of traffic of Pennsylvania-Central Airlines.

Shown at right is Edward Sullivan, PCA's general traffic manager who is located at company offices in Pittsburgh.



# PCA's New "Capital Fleet" *Goodrich-Equipped*



## Goodrich Tires and DE-ICERS on the Job with "Pennsylvania-Central's" Fast-Growing Fleet

1,140 passengers in 1930! Over 122,000 carried in 1939! "Pennsylvania-Central's" rapid rise is a striking illustration of America's growing conviction that "it pays to fly."

And PCA's new up-to-the-minute "Capital Fleet" is an even greater challenge—a new and distinct contribution to the safety and comfort of air travel. As part of PCA's modern equipment Goodrich Airplane Silvertowns have been assigned to make landings safer and smoother . . . and Goodrich DE-ICERS will protect "The Capital Fleet" whenever schedules

require flying at ice-forming altitudes.

Remember, Goodrich leadership in aviation includes the world-famous Goodrich Airplane Silvertown Tire . . . Goodrich DE-ICERS . . . Goodrich E.T.\* Brakes and over 40 other products. Before you build any plane, find out how Goodrich Aviation Products will increase its safety and comfort. Get in touch with The B. F. Goodrich Co., Aeronautical Division, Akron, Ohio.

\*Goodrich Expander Tube Brakes are manufactured under license and sold by Hayes Industries, Inc., Jackson, Mich., and Bendix Aviation Corp., South Bend, Ind.



## OVER 510,000 PASSENGERS

Pennsylvania-Central Airlines has carried over 510,000 passengers and has rolled up more than 70 million passenger miles of flying. And its expansion from 140 route miles in 1927 to 2,091 route miles today has linked together by air still more of the nation's most important cities.



*IT PAYS TO FLY*  
and it pays to take off  
and land on Goodrich  
Airplane Silvertowns  
>>>> the safest air-  
plane tires ever built

# Goodrich Airplane Silvertowns THE SAFEST AIRPLANE TIRE EVER BUILT

Over 40 Rubber Products for Airplanes—Including Tires—Tail Wheels—Abrasion Shoes—DE-ICERS—Matting—Rubber Hose—Grommets—Shock Absorber Cord—A Complete Line of Rubber Aeronautical Accessories.

# AIR CARRIER RECORD

(C. A. B. Applications, Hearings, Dockets)

## Export Asks CAB Approval of TACA Deal

American Export Airlines on Oct. 19 asked CAB approval of its recent purchase of TACA. Complete story on page 3.

## Braniff Mail Rates Proposed

CAB Examiner Robert Bartoo in a proposed report issued Oct. 11 recommended new mail rates for the Braniff Airways system. Complete story on this page.

## MCA Rate Recommended

CAB Examiners Francis Brown and Francis Reilly have recommended 36c per mile mail pay for Mid-Continent's AM48. Complete story on page 9.

## Four New Routes Open

Four new domestic airline routes, totaling 1,336 miles, were to be opened Nov. 1 by Penn-Central, Mid-Continent and Braniff. See story on page 1.

## American Granted Intervention

American Airlines has received permission to intervene in the hearing on applications of Eastern Air Lines and TWA involving St. Louis-Washington and St. Louis-Dayton routes. Braniff Airways has been granted permission to withdraw its application for St. Louis-Washington.

## Alliance Stop Proposed for Inland

A stop at Alliance, Neb., on Inland Air Lines' AM35 was recommended Oct. 19 by CAB Examiner Lawrence Koster. The stop would be made between Scottsbluff, Neb., and Rapid City, S. D., a route extension of 21 miles.

## C&S Asks Springfield Suspension

Chicago & Southern Air Lines has asked CAB permission to suspend service at Springfield, Ill., effective immediately, until the Springfield airport is improved for safe operation of Douglas DC-3 equipment.

## EAL Seeks Stops

Eastern Air Lines has asked the CAB for a stop at Knoxville on AM10, and Ocala and Orlando as intermediate and terminal stops, respectively, on AM40.

## Wilmington-Catalina Wants Stops

Wilmington-Catalina Airline has filed application for inclusion of Long Beach as an intermediate point and Los Angeles as a terminal point on its operation to and from Avalon, Santa Catalina Island.

## Southeast Routes Oral Argument

Oral argument on examiners' report involving applications of Delta, Dixie Airlines, Pennsylvania-Central Airlines, Southern Air Lines, and Eastern Air Lines was heard by CAB, Oct. 17. Complete story on page 6.

## UAL Reading, Pa., Stop

Hearing was held Oct. 10 on application of United Air Lines to include Reading, Pa., on AM-1.

## Eastern Asks Additional Stops

Eastern Air Lines requested the inclusion of Savannah, Ga., on AM-10, and Brunswick, Ga., on AM-6, in hearing before CAB examiner Oct. 21. In hearing Oct. 23, Eastern asked designation of Winston-Salem, N. C., as intermediate point on AM-5.

## Calendar of Hearings

Nov. 6—Pennsylvania-Central Airlines, Eastern Air Lines, and TWA, applications to furnish service to Atlantic City, N. J.

Nov. 14—Continental, Braniff, Essair, and TWA, hearing on additional service to Texas points.

Nov. 25—American Airlines, rate hearing.

# Mail Rates for Braniff System Proposed by Examiner Bartoo

CAB Examiner Robert J. Bartoo on Oct. 11 recommended that Braniff Airways receive mail pay of 16c per mile on AM9, Chicago-Ft. Worth; 20c on AM15, Amarillo-Brownsville, and 30c on AM50, Houston-San Antonio, Houston-Corpus Christi.

Rates on AM9 and 15 would become effective "on and after the effective date of the further order of the Board in this proceeding, at which time the Postmaster General will designate for the carriage of mail all schedules of petitioner which are defined as 'approved schedules.'" Rate on AM50 will become effective "on and after the date that mail service is inaugurated on said route."

Bartoo noted that the company had requested 35c and 32c on AM9 and 15, respectively. AM50, the new mail route paralleling Eastern Air Lines' AM42, is not yet in operation but is expected to open Nov. 15. In its first decision, the Board granted Braniff 28c on AM9 and 25c on AM15.

Bartoo made the following recommendations:

1. That the rates for AM9 and 15 fixed by order of the Interstate Commerce Commission and continued in effect by the CAB's Aug. 8, 1939 order, during the period Oct. 28, 1939, date of filing of the rate petition, and terminating July 31, 1939, were fair and reasonable.

2. That the base rate of 28c for AM9, effective on and after Aug. 1, 1939, was and is fair and reasonable.

3. That the base rate of 25c for AM15, effective on and after Aug. 1, 1939, was fair and reasonable from Aug. 1, 1939, to Dec. 31, 1939, and that said base rate should be increased to 28c effective Jan. 1, 1940, provided that if schedules on AM50 are designated for carriage of mail prior to that date of the further order of the Board in this proceeding, said base rate should be reduced to 23c effective as of the date mail service is begun on AM50.

4. That the operation of a round trip between Dallas and Chicago in addition to the pay mail schedules presently authorized on AM9, and a round trip between Dallas and Houston, two round trips between Dallas

and San Antonio, a round trip between San Antonio and Corpus Christi and a trip from Ft. Worth to Dallas in addition to pay mail schedules presently authorized on AM15 are required in the interests of commerce and the national defense on a daily frequency and on an annual basis.

5. That the operation of a round trip between Corpus Christi and Brownsville in addition to the pay mail schedules presently authorized is not required.

The AM9 and 15 rates would be based on the first 300 lbs. of mail, or fraction, plus .7c for each additional 25 lbs., based on direct airport-to-airport mileage. The AM50 rate would be on the first 300 lbs. plus 2.5% of such rate for each additional 25 lbs.

## Seaboard Airways Appoints

A. W. Stephenson Supervisor

A. W. Stephenson, formerly division superintendent of Western Air Express, has been named supervisor of operations of Seaboard Airways Inc., according to Alvin F. Adams, president.

## UAL Sponsors Broadcast



Marking the first time that an airline has sponsored a regular program on a major network, United Air Lines on Oct. 23 inaugurated a series of bi-weekly broadcasts presenting Boile Carter, nationally known news commentator and war-time flyer, over the Mutual network. Carter is shown at left with Crew Chief Roy Bues of United, brushing up on his knowledge of airplanes and engines.

# OPERATIONS OF PAN AMERICAN AIRWAYS CARRIERS FOR JULY

(Compiled from Company Reports to the CAB<sup>a</sup>)

	Rev. Pass.	Rev. Pass.	Avail. Seats	Pass. Load	Exp. & Frt.	Mail	Pass.	U. S. Mail	Foreign Mail	Operating	Operating	Cost per b	Net Revenue
	Miles	Miles	Miles	Factor	Lb.-Miles	Lb.-Miles	Revenue	Revenue	Revenue	Expense	Expense	Mile Fl.	From Operations
Pacific Alaska Airways Inc., Juneau-Fairbanks	90,279	31,254,040	44,444,878	70.32%	85	171,745,340	388,661,715	\$1,894,383	\$232,076	\$2,046,398	\$1,663,193	\$-68	\$307,346
Pacific Alaska Airways Inc., Seattle-Juneau	303	182,199	94,118	60.23%	5	883,398	2,049,097	32,138	23,019	56,308	49,423	.46	6,827
Pan Am. Airways Co., New York-Bermuda	203	327,867	164,118	80.59%	13	16,329,828	87,033,917	16,225	71,548	240,108	223,861	.52	16,768
Pan Am. Airways Co., New York-Labrador	362	1,168,123	2,177,168	81.2%	9	2,840,992	21,078,184	119,878	38,118	117,777	108,437	.59	6,379
Pan Am. Airways Co., San Francisco-Auckland	812	1,378,319	2,177,168	81.2%	6	7,774,884	7,774,884	22,348	42,197	65,138	53,135	.56	11,717
Pan Am. Airways Inc., Western Division	4,989	1,357,728	2,489,192	80.83%	9	74,893,493	193,930,869	618,098	148,471	804,365	784,900	.57	40,635
Pan Am. Airways Inc., Eastern Division	5,812	3,303,171	5,812,307	81.08%	31	74,893,493	193,930,869	17,867	33,979	52,562	27,186	.26	25,068
Pan Am. Airways Inc., Western Division	1,689	442,325	1,049,660	42.14%	8	853,716	4,176,000	62,531	4,096	66,308	59,380	.75	16,925
Pan Am. Airways Inc., Eastern Division	1,804	1,344,284	2,082,188	60.84%	6	1,418,933	0	1,057	0	1,079	8,532	.61	4,448 (red)
Pan Am. Airways Inc., Eastern Division	787	188,518	36,399	36.39%	3	510,750	0	0	0	0	0	0	0
Uraba, Medellin & Central Airways Inc.	190	99,543	234,408	42.45%	2	487,620	0	0	0	0	0	0	0

<sup>a</sup> All monthly reports to the CAB are subject to revision and year-end adjustment.

<sup>b</sup> Total operating expenses divided by total plane miles; computed to nearest half-cent.

<sup>c</sup> Not reported by company.

# SUMMARY OF U. S. AIR TRANSPORT OPERATIONS FOR AUGUST

(Compiled and Mileage Costs Computed from CAB Reports<sup>a</sup>)

	Rev. Pass.	Rev. Pass.	Avail. Seats	Pass. Load	Exp. & Frt.	Mail	Pass.	U. S. Mail	Foreign Mail	Operating	Operating	Cost per b	Net Income
	Miles	Miles	Miles	Factor	Lb.-Miles	Lb.-Miles	Revenue	Revenue	Revenue	Expense	Expense	Mile Fl.	(Before Inc. Taxes)
American	3,961	580,714	944,118	60.23%	5	883,398	2,049,097	32,138	23,019	56,308	49,423	.46	6,827
Braniff	1,447	3,809,743	6,157,061	62.03%	13	16,329,828	87,033,917	16,225	71,548	240,108	223,861	.52	16,768
Chicago & Southern	4,472	1,731,698	3,558,263	48.39%	6	7,774,884	7,774,884	22,348	42,197	65,138	53,135	.56	11,717
Continental	1,878	541,838	943,638	58.09%	9	2,840,992	21,078,184	119,878	38,118	117,777	108,437	.59	6,379
Delta	4,989	1,357,728	2,489,192	80.83%	9	74,893,493	193,930,869	618,098	148,471	804,365	784,900	.57	40,635
Eastern	32,380	11,812,207	23,134,899	81.08%	31	74,893,493	193,930,869	17,867	33,979	52,562	27,186	.26	25,068
Inter-Inland	3,404	807,247	745,561	68.04%	6	1,418,933	0	1,057	0	1,079	8,532	.61	4,448 (red)
Marquette c	85	19,446	54,336	35.79%	3	510,750	0	0	0	0	0	0	0
Mid-Continent	2,420	717,528	1,378,658	45.40%	2	487,620	0	0	0	0	0	0	0
National	1,583	396,117	1,016,110	39.05%	4	881,122	0	0	0	0	0	0	0
Northwest	16,658	6,842,101	10,838,804	63.13%	18	23,994,824	130,066,708	290,354	153,488	497,802	348,789	.63	106,321
Penn-Central	34,608	4,388,212	7,056,170	62.14%	17	17,073,581	32,327,118	259,047	51,938	314,956	282,366	.67	1,937
TWA	37,009	18,236,346	27,929,572	65.29%	40	96,809,090	400,214,516	8,272	228,537	1,200,335	1,113,695	.68	71,360
Marquette	787	188,518	36,399	36.39%	3	510,750	0	0	0	0	0	0	0
United	84,223	27,080,520	38,979,689	70.19%	62	208,270,416	488,831,660	1,346,828	321,518	1,778,473	1,378,653	.68	412,261
Western Air Express	6,085	2,038,788	3,444,918	62.83%	8	1,418,933	33,199,822	86,192	70,855	175,223	130,479	.58	45,509
Wilmington-Catalina	6,419	192,370	236,060	74.36%	2	487,620	0	0	0	0	0	0	0
Totals	303,608	111,497,173	178,126,277	63.31%	328	842,936,248	1,747,679,982	\$5,628,769	\$1,620,115	\$7,888,233	\$6,461,903	...	\$1,064,236

<sup>a</sup> All monthly reports to the CAB are subject to revision and year-end adjustment.

<sup>b</sup> Total operating expense divided by total plane miles; computed to nearest half-cent.

<sup>c</sup> One rented.

<sup>d</sup> Figures reported by TWA for operation of Marquette Airlines route, Aug. 18-31, are included in TWA totals.

NOTE: The following corrections to June operating reports (AMERICAN AVIATION, Sept. 1, p. 22) have been submitted to CAB: Chicago & Southern Air Lines: Passenger revenue \$78,538 instead of \$78,117; mail revenue \$34,234 instead of \$34,302; total operating revenue \$112,608 instead of \$112,200; total operating expense \$78,996 instead of \$79,785. Penn-Sylvania-Central Airlines: Mail revenue \$37,412.330 instead of \$37,878,640; passenger revenue \$235,369 instead of \$236,304.



## CAB Examiners Recommend 36c Mail Pay for Mid-Continent's AM48

CAB Examiners Francis W. Brown and Francis Reilly on Oct. 10 recommended that Mid-Continent Airlines be paid 36c per mile for the carriage of mail over AM48, the company's new Twin Cities-Kansas City, Des Moines-St. Louis route.

The examiners recommended that the rate be for the first 300 lbs. of mail, or fraction, plus 2.5% of such rate for each additional 25 lbs. Payment would be computed on direct airport-to-airport mileage.

MCA originally requested 36c per mile, but raised this to 40c at the hearing. The company also sought to have the rate based on the first 100 lbs.

"In order to assure prompt inauguration of the service found by the Board to be required by the public convenience and necessity, it would appear in the public interest for the Board to fix a rate at this time, even though data with respect to the cost of operating Lodestar equipment are now unavailable," the examiners said.

"In addition the evidence of record is based upon one daily round trip over route 48 although the Board has heretofore indicated that a proper development of the traffic potentials inherent in the route will require at least two daily round trips.

"The rate recommended here would, therefore, be of a temporary character, subject to review by the Board after operations are conducted for a reasonable length of time or an increase in frequency is proposed."

MCA is opening the route on Nov. 1.

### New Board Member



Ralph Stapleton Euler

Vice-president of Union Trust Co. of Pittsburgh is a new addition to the board of Transcontinental & Western Air Inc. Euler is a resident of the borough of Edgeworth, Pa.

### Germans Reveal Design Of 8-Passenger Airliner

A new twin-engine, low-wing German airliner carrying eight passengers and a crew of two has been designed by the Siebel Flugzeugwerke K. G. Body and wings of the all-metal monoplane, designated the Si-204, are of shell-type construction, with the wings carrying the two Argus AS-410, 380-hp. V-engines.

The plane is expected to have a maximum speed of 200 mph. at 10,000 feet and a maximum range of 1,243 miles.

### 17 Governors Aid Dedication of Eastern Air Lines Bldg.

Governors of the 17 states served directly by Eastern Air Lines participated in ceremonies dedicating the new Eastern Air Lines Bldg., 10 Rockefeller Plaza, New York City, Oct. 15. As the chief executives pressed telegraph keys in the chambers of their state capitols or near-by spots, electric light bulbs on a huge map in front of the plaza structure flashed on, the bulbs marking the principal airport of each state, with one exception: the map-maker had failed to include a marker for Newark Airport, now closed to airline operations, so the New Jersey and New York connections were linked and the LaGuardia Field bulb responded to simultaneous signals of Gov. A. H. Moore of New Jersey and Gov. H. H. Lehman of New York.

Speakers at the dedication were Mayor F. H. La Guardia of New York City, Capt. E. V. Rickenbacker, president of Eastern, and Laurance S. Rockefeller, a director of Eastern. Besides New York and New Jersey, the states served by Eastern are Pennsylvania, Maryland, Virginia, North Carolina, South Carolina, Florida, Illinois, Indiana, Missouri, Kentucky, Tennessee, Georgia, Alabama, Louisiana and Texas. The Eastern Air Lines Bldg. is the last of 14 buildings in Rockefeller Center to be completed.

### AA-Marquette Probe Closes

The investigation instituted by the CAB several months ago into certain contracts between Marquette Airlines and American Airlines has been officially terminated. There will be no examiner's report or CAB decision.

### HALE IN LAW FIRM

American Airlines Attorney Becomes Member of Pruitt, Hale & MacIntyre

Hamilton O. Hale, attorney for American Airlines, has become a member of the law firm of Pruitt & MacIntyre, which will now be known as Pruitt, Hale & MacIntyre. Hale, a member of the Illinois bar, was recently admitted to the New York bar.

Robert G. Howlett, who also has represented American, has been admitted to the New York bar and will be associated with the firm. Messrs. Pruitt, Hale and Howlett will continue their connection with the firm of Pruitt & Grealis of Chicago.

### MCA Officers Re-elected

Stockholders of Mid-Continent Airlines in annual meeting Oct. 3 at Kansas City, Mo., re-elected all company officers. Officers are: Thomas F. Ryan III, president; A. S. Hanford, chairman of the board; J. W. Miller, vice-president-general manager; Vernon A. Dorrell, vice-president-operations; W. W. Howes, vice-president-public relations; J. C. Collins, secretary and treasurer; C. A. Wicks, assistant secretary and assistant treasurer. Directors include: Ryan and Hanford, of Sioux City, Ia.; Miller, Dorrell, Collins and Milton McGreevey, of Kansas City, Mo.; Howes and John S. Wynne, of Washington, D. C.; Theodore N. Law, Tulsa, Okla.; H. M. Thrall, San Francisco, Cal.; and John Morrell Foster, Sioux Falls, S. D.

### Baltimore Terminal Dedicated

Indication that Baltimore's long-awaited new municipal airport is approaching completion was given with laying of cornerstone of the terminal building by Mayor Jackson Oct. 14. After several years of intermittent work, it is now estimated that the field will be ready for airline operation by early next summer.



Fly to

## BIG GAME HUNTING

Colorado and New Mexico offer some of the finest big game hunting in the country. Excellent big game areas are found near several cities directly served by Continental Super-Lodestars.

America's Continental Fastest



# CONTINENTAL AIR LINES

### Airport Group to Re-open Newark, Maybe by Nov. 15

Probable re-opening of Newark Airport to four airlines seeking to resume operations there has been announced for Nov. 15, by Richard Weil Jr., chairman of the special committee to raise supporting funds through subscription. The \$100,000 goal to finance the non-profit corporation which would operate the airport independently of the city has been passed by \$10,000, he said.

Members of the board of trustees of Newark Airways Inc., the newly formed operating organization, are Franklin Conklin, Jr., chairman, Ralph E. Lum, Horace K. Corbin, William B. Reilly, and Casey Jones, president of Casey Jones School of Aeronautics. In contracts with American Airlines, Eastern Air Lines, United Air Lines, and TWA, to be signed after the company negotiates a lease for the airport property with the city, Newark Airport will be recognized as a full co-terminal with La Guardia Field.

## NEW AIR SERVICE STARTS NOV. 1st

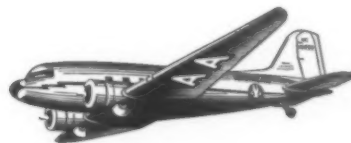
between

St. Louis—Minneapolis—St. Paul, via Ottumwa, Des Moines, Rochester

and between

Kansas City—Minneapolis—St. Paul via Des Moines, Rochester

THE GREAT PLAINS ROUTE



## KEEPING FIT...

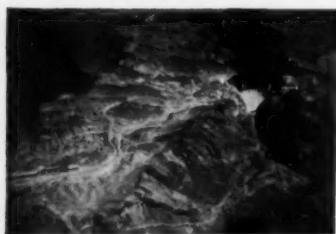
THE art of keeping healthy is an inherent characteristic of air transportation. The industry is subject to such increasing public demand for more and more schedules, more and more planes that it hasn't time to sit back and grow old. Its daily problems keep it everlastingly youthful. Whatever demands may be made upon it now or in the future—the industry will be found fit and ready.

# AMERICAN AIRLINES Inc.

ROUTE OF THE FLAGSHIPS

## DEATH VALLEY LURES THE AIR TOURIST

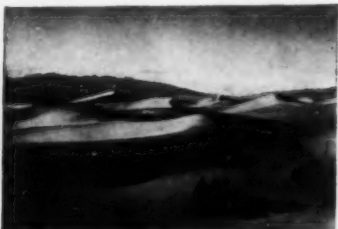
FOR the first time a comprehensive program of all-expense tours to the Death Valley-Las Vegas-Boulder Dam desert area will be available to air travelers this season. These tours have been especially arranged by Western Air Express and United Air Lines, working in conjunction with Riddle Scenic Tours who handle all of the ground sightseeing from their Las Vegas headquarters.



Western Air Express operates both east-bound and westbound scenic trips which make a complete circle of Boulder Dam before landing at Las Vegas. Special stopover ground tours are available, costing as little as \$7.00 from the airport.



All-expense tours of Death Valley include meals and lodging at luxurious Furnace Creek Inn, set in a green oasis of date palms in the heart of the Valley. From this point it is but a short distance to Badwater, lowest point in western hemisphere.



The shifting sand dunes are but one among dozens of natural wonders in and around Death Valley. The entire tour is a constant procession of gorgeous scenery, the like of which is not to be found anywhere else on earth.



High point of the tour is a luncheon and trip through Death Valley Scotty's fabulous castle. Over 2½-million dollars has already been spent on this magnificent structure which is still far from complete. The trip to Scotty's Castle is included in the 2-day tour of Death Valley which costs from \$31.50 to \$36.00, depending on accommodations selected.

## Airline Personnel

STANLEY HARRISON RAINEY, a native of Buechel, Ky., has been appointed field & traffic manager for Eastern at Evansville, Ind. He was placed in charge of the Evansville office coincident with the inauguration of service from that city to St. Louis. Rainey joined EAL at Louisville Sept. 1, 1936, as transportation agent. On Apr. 14 of this year, he was transferred to Greensboro, where he remained until his recent appointment.

Bob Baker, formerly with TWA at Harrisburg, Pa., resigned recently to work in traffic for the Pennsylvania Railroad.

E. W. Albrecht, counter salesman, has been promoted to outside salesman in charge of convention solicitation in United's New York office.

A. J. Fallon, also a counter salesman, has been made manager of the new Wall Street office. James B. Barksdale Jr. and James A. Wotten have been employed as counter salesmen.

American Capt. Ted Melden and First Officers Harold Charlot and E. F. Kinnaird are now based at Cincinnati.

E. C. Taylor has been appointed station manager for American in Chicago. Taylor has been with the line since Feb. 1935 and before his promotion to the present position, served as assistant station manager in Buffalo.

Ray Kelly, superintendent of engineering research for United, has announced the appointment of W. W. Davies as assistant superintendent of engineering research. Davies formerly was project engineer in charge of passenger comfort.

Thomas Kenneth Mattingly has been appointed field manager for EAL at St. Louis coincident with the company's extension of service from Nashville to L.S. He joined the company on Jan. 1, 1931, and in 1937 was made chief mechanic at Chicago.

Although TWA recently suspended service at Harrisburg, Pa., until airport repairs are completed, the following composed the line's staff at that station: Jack Hollywood, d. t. m.; Eleanor Belles; Vince J. Stott, station mgr.; Russ Garin, chief radioman; Harry Davis, Jimmy Campbell and Scotty Cohick, radiomen; Dave Newton, chief passenger agent; Homer Schreiner and Lou Schuch, passenger agents; Skip Bennett, junior passenger agent; Bob Woodbridge, reservations clerk, and Tom Fenstermacher.

Herman Boyer, former manager of UAL's Pennsylvania Hotel traffic office in New York, has been transferred to Philadelphia. Thomas E. Lindsey, former counter salesman in Washington, also is a new addition to the line's PG office. Edward J. Byrne replaces Boyer in NY.

The following recently were added to AA's reservations staff in New York: Wade Weathers, Henry Nehr, Edwin Meyer, D. Neilson, M. Lynam, Howard Flett, Kenelm Herschel, R. Laflitte, Charles Royek, Frank Gostout, George Bright, George O'Connell, James Lambert, John Rogers and M. MacDonald.

James P. Farrell has been appointed city traffic manager for Eastern at St. Louis from traffic representative at Newark coincident with the company's extension from Nashville to L.S. Farrell joined EAL on Dec. 1, 1933. His new headquarters are at 1011 Locust St., St. Louis.

TWA recently promoted the following mechanics to the position of flight engineer: R. T. Welliver, C. J. Foster and L. A. Beggs at Kansas City, and W. E. Carneal and Z. M. Vincze at New York.

John Standish recently was added to United's Portland, Ore., office staff as outside salesman. George Howard has been added to the line's staff in Hollywood.

Wilson Woodbeck, a porter for American at 45 Vanderbilt Ave., New York, gave his first professional vocal concert recently in New York's Carnegie music chamber. Arrangements were made by AA's Jim Adamson of the city ticket office. Woodbeck has been with American five years and previously had been a Pullman porter for 11 years.

Two additions to EAL's family at Greensboro, N. C., are Linsey Hicks and Scott Haynes. Charles Hunter left the GW office recently to join Parks Air College as flight instructor.

Recent TWA promotions and transfers of flight personnel follow: Henry C. Dilts, from captain, Pittsburgh, to flight superintendent, La Guardia Field, New York; J. J. Thompson, first officer to reserve captain, Kansas City; L. K. Welch, first officer to reserve captain, LG; G. E. Johnson, reserve captain, LG, to captain, PT; T. L. McKissack, captain, PT to Chicago.

Cecil Fitch, formerly of United's reservations office in Los Angeles, has been transferred to Salt Lake City as counter salesman.

Radiomen F. S. Broderick Jr. and N. F. Arveschoug of American recently were transferred from Chicago to Cincinnati, and from Philadelphia to Pittsburgh, respectively.

John Thomas Matthews, Jr. has joined EAL at Charlotte, N. C.

Walter T. Harris and George E. Jewell of TWA have been promoted from passenger agent to chief passenger agent at Burbank, Cal., and Indianapolis, Ind., respectively.

Sanford L. Wartell joined United's pilot staff recently, having been previously employed by Narragansett Aviation Service at Rhode Island State Airport.

Flight personnel of AA now based at Nashville, Tenn., follows: Capt. Durwood W. Leebetter, Thomas J. Lee, Harold E. Matheny, William H. Moore. First Officers Lewis E. Burns, Rensselaer C. Havens, William T. Newkirk, John W. Rogers.

EAL recently transferred Rex Hunicutt from Nashville to Dothan, Ala., as station manager. Willard F. Lanier left EAL at NA recently to join Airways Traffic Control in Washington. Additions to the NA staff are Bill Andre from Chattanooga, R. E. Fuller, formerly of Indianapolis, and Clarence Littlejohn from Atlanta.

D. F. Wadsworth at Kansas City and Floyd W. Yeaker at New York, both former Link trainer instructors for TWA, have been promoted to junior Link trainer apprentice operator and assistant Link trainer operator, respectively, at their old stations.

W. D. Gremp, Parks Air College graduate, is flying for United as a first officer between Chicago and Cheyenne, being based at CG.

New personnel recently assigned by EAL to the Tampa, Fla., station include Robert H. Grant, Arthur M. Fort and Lloyd A. Martin.

The following United employees attained 10 years' service recently and received diamond service pins: Paul Odell, Hollie F. Koch, Lowell D. Bean, Carl B. Hempel and C. A. LeMaster, all at Cheyenne, Wyo.; Capt. Marion Sterling, New York, and Victor Peri, Oakland, Cal.



S. R. Newman who went to Portland, Ore., one year ago as district traffic manager for United, has won the honor of being named one of the 18 directors who annually put on the famous Portland Rose Festival, a feature of which is the Post Office Employees Air Mail Rose Show. Demonstrating the desirability of using air mail in moving perishable material, the Air Mail Rose Show has been a decided success in Portland.

TWA has promoted the following as passenger relations managers: J. B. Fennell, Pittsburgh; A. E. Lunceford, Burbank, Cal.; Glenn Wise, Chicago, and Harry C. Youmans, La Guardia.

Franklin Vonnegut is now division manager of Eastern's newly created Gulf Division, including Memphis, Muscle Shoals, Birmingham, Montgomery, Dothan, Mobile and New Orleans.

Having attained 10 years' service in August, the following UAL employees received diamond service pins: Joseph M. Chase, New York; George S. Edmonstone and Otis L. Ford, Oakland, Cal.; W. C. Ables, Seattle; J. Hunter Manson, Fresno, Cal., and G. Langedyk, Cheyenne, Wyo.

### Money's Worth

Quoting from the bulletin of the U. S. Chamber of Commerce: "Air mail was flown in the fiscal year of 1933 over a total of 35,900,000 miles at a cost to the government of \$19,400,000, and at a cost of \$19,800,000 for 64,000,000 miles in the year ended with June 1940. If the government got as much for its money in some other directions, the budget would look better."

### Along the Lines

Six Candles for National—Six years ago Oct. 15, National Airlines' payroll of five men and one single engine plane began operating on round trip daily between St. Petersburg and Daytona Beach, Fla., by way of Tampa, Lakeland and Orlando. Now serving New Orleans-Miami route the company expects to place Lockheed Lodestars into operation shortly.

TWA Increases Service on Marquette Route—TWA, which began operating the Marquette Airlines route Aug. 1, added a third daily round trip along the Detroit-Dayton-Cincinnati segment, Oct. 15.

Braniff Inaugurates Additional Texas Schedules—Second daily round trips between Houston and San Antonio, and Houston-Corpus Christi were inaugurated by Braniff Airways Oct. 15. Company's reduced 30-day excursion rates recently announced are effective on new schedules.

Delta to Receive First DC-3 in November—Delta Air Corp. will take delivery late in November of the first of six Douglas DC-3's, the other plans to follow in December and early January.

### Cussen to Cleveland

George T. Cussen, who has been American Airlines' sales representative in Chicago, has been transferred to Cleveland as district sales manager for the company. Former western manager of TWA, Cussen has had more than 10 years of experience in commercial aviation.

### TACA Plane Crashes

A transport plane of TACA, Central American airline, crashed in Panama on Oct. 6, killing the Panamanian pilot and his five passengers.

### New Pattern



United Air Lines' new ticket office just opened in Seattle marks a new pattern which will be followed eventually in all of the ticket offices of the United system. The next office to be installed in the new style will be in Hollywood.

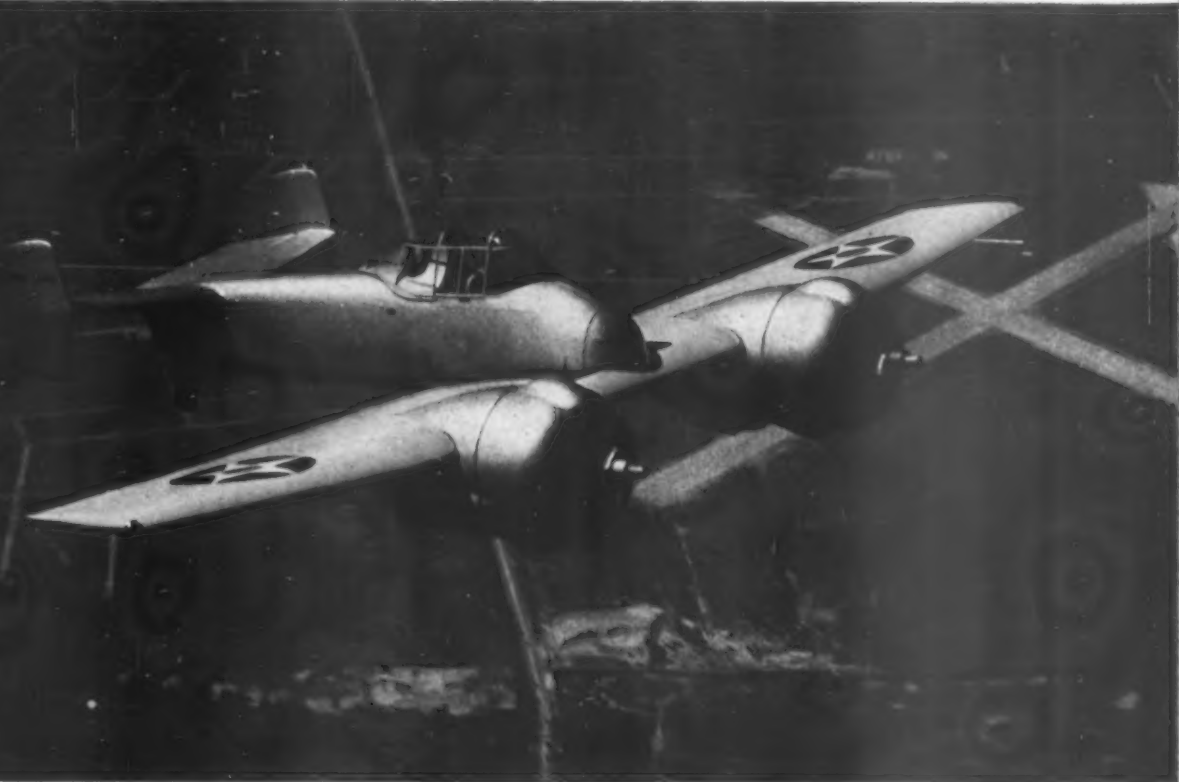
### METEOROLOGISTS

with minimum of one year's experience, preferably airline, wanted by progressive major airline. State training, experience, availability and expected salary in first letter.

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# In the Tradition of the *Navy...*



## The Grumman Twin-Engine Fighter

with



**S**ince the days of "Old Ironsides," the U. S. Navy has launched fighting ships for the world to follow . . . the first

steam warship, the first ironclad, the first submarine, the first aircraft carrier. The progress of Naval Aviation has introduced an impressive list of original aircraft types, including the first dive-bomber, torpedo plane and long-range patrol bomber.

The new twin-engine Grumman XF5F-1, powered by two 1200 H. P. engines and equipped with Curtiss Electric Propellers, is typical of these progressive designs for which the Navy has been responsible through its cooperation with industry.

The great speed of this airplane and its high degree of maneuverability are in keeping with the Navy tradition of technical achievement.

### CURTISS PROPELLER DIVISION

*Curtiss-Wright Corporation*  
Caldwell, New Jersey

**CURTISS** *Electric*  
PROPELLERS

## OUR SECOND LINE OF AIR DEFENSE

*pays its way*

To the growing appreciation of our airlines as a second line of defense can be added the satisfaction that this matchless system has been built up without cost to the taxpayer. With no government subsidy other than air mail contracts, which postage now pays, our airlines have expanded into a major national defense network solely through passenger and cargo revenue. The dependability of Douglas airplanes has been a major factor in this success. "It Pays to Fly."

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First Around the World



First in Air Defense

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## Visiting Army Officers



Shown here is the first group of ranking South and Central American army officers who flew in an American Airlines Flagship on an inspection tour of U. S. airports and military bases. Shown at Bolling Field, D. C., the group is being greeted by Gen. George C. Marshall, chief of staff, U. S. Army. The above group was followed by a similar group which departed from Bolling on Oct. 17 in an American Flagship.

## 18 New Air Corps Stations Named

Sites selected by War Department during early October for 18 new Air Corps stations are sprinkled among 15 states, 13 of them coastal or border, and include:

Municipal Airport, Bangor, Me.; Manchester, N. H.; Charlotte, N. C.; Atlanta, Ga.; Jackson, Miss.; Boise, Idaho; Bowman Field, Ky.; Albuquerque, N. M.; Portland, Ore.; Everett, Yakima, and Sunset Airport, Spokane, Wash.; Salinas, and Municipal Airport, Fresno, Cal.; Baton Rouge, La.; Fort Devens, Mass.; Municipal Airport, Hartford, Conn.; and Fort Wayne, Ind.

## Navy's Jacksonville Air Station Commissioned

The Navy's new \$15,000,000 southeastern air station at Jacksonville, Fla., was commissioned Oct. 15, more than six months ahead of schedule.

The new base will train pilots who have completed a one month's preliminary course at one of the Naval Reserve Aviation Bases now in commission.

The station's pilot training course will probably begin on Jan. 1, 1941, with an initial entry rate of approximately 50 pilots per month to be increased to 200 per month by July 1, 1941.

## Air Station Dedicated

The \$2,000,000 Coast Guard Air Station at Elizabeth City, N. C., was dedicated Oct. 17 with Rep. Lindsay C. Warren of North Carolina as the principal speaker.

## Air Corps Generals Assigned New Posts

Assignment of six of the recently appointed Air Corps generals to new stations has been announced by the War Dept.

Maj. Gen. Frederick L. Martin has been relieved from command of the 3rd Wing, Barksdale Field, Shreveport, La., and has been assigned to command the Hawaiian Air Force. Brig. Gen. Herbert A. Dargue has been transferred from command of the 19th Wing, Albrook Field, Panama Canal Zone, to Washington, D. C., as assistant chief of the Air Corps; and Brig. Gen. Douglas B. Netherwood, formerly Mitchel Field, N. Y., commander, will succeed Gen. Dargue in the Canal Zone.

Brig. Gen. Gerald C. Brant has been transferred from command of the Air Corps Technical Schools, Chanute Field, Rantoul, Ill., to command of the Gulf Coast Training Center, Randolph Field, Tex.; Brig. Gen. Rush B. Lincoln from duty at March Field, Cal., to Chanute Field, succeeding Gen. Brant; and Brig. Gen. Davenport Johnson from duty as assistant commandant of the Air Corps Technical Schools, Chanute Field, to Washington, D. C., as assistant chief of the Air Corps.

Other changes in station for Air Corps officers include Maj. Gen. Barton K. Yount from duty as assistant chief of the Air Corps to command of the Panama Canal Air Force; Maj. Gen. Jacob E. Fickel from duty as assistant chief of the Air Corps to Air District Commander at Riverside, Cal.; and Brig. Gen. Walter H. Frank from duty in the Hawaiian Department to General Headquarters Air Force with station at New Orleans, La.

## 4 Air Corps Districts Created; Will Increase from 4 to 17 Wings

Creation of four air districts, known as the Northeast, Southeast, Northwest and Southwest, and an increase from the four Wings now existent in continental U. S. to 17 Wings, as trained personnel and equipment, now in production, becomes available, was announced Oct. 24 by the War Dept.

The Northeast district has headquarters at Hartford, Conn., the Southeast at Tampa, Fla., the Northwest at Fort George Wright, Spokane, Wash., and the Southwest at Riverside, Cal.

"The purpose of the creation of the Air Districts is to effect decentralization of training and inspection duties of the Commanding General, GHQ Air Force, and to provide for the development of commanders and staffs for such special task forces as may be required for operation in war," the Dept. announced, adding that the Commanding General will move his headquarters from Langley Field to Bolling Field, D. C.

"The 17 Wings authorized are part of the Air Corps expansion program which embraces the ultimate activation of 54 Combat Groups with their necessary complementary services. This highly mobile fighting force will be so organized as to permit efficient operation by the whole or any specially organized

portion in the defense of any theater of the western hemisphere."

At present the Air Corps is organized into 25 Combat groups with four wings in continental U. S. and two in overseas possessions.

"The War Department has adopted for the Army's aviation objective for active training and organization approximately 12,800 airplanes of all classes and types; and increase in all enlisted personnel for duty with the Air Corps from 45,000 to 163,000, including an increase in annual output of trained pilots from 7,000 to 12,000; an increase in Air Corps Technical Schools and instructors to provide the many skilled mechanics and other specialists required to maintain and operate the modern fighting planes, and the acquisition of many new stations for new Combat Groups, to be activated as the personnel and materiel for them become available," the War Dept. said.

"The figure of 12,800 planes . . . refers only to those tactical planes required to equip the 54 Combat Groups (plus a small reserve), and to those required for basic and advanced flying training purposes, and is included in the approximately 18,000 planes already contracted for or received, the remainder of which are being procured as an equipment reserve."

## War Department Assigns Military Attache to Egypt

The War Dept. will have a military attache in Egypt for the first time since 1922 with the assignment of Maj. Bonner F. Fellers, now assistant military attache to Spain, to duty in Cairo.

Present importance of Egypt in the international situation was given as the reason for the move.

## U. S. Officers Examine Britain's Air Problems

Sending of three American Army officers to England for several weeks as military observers to study technical problems relating to operations, materiel and personnel in connection with Great Britain's air defenses has been announced by the War Dept.

The officers include Maj. Gen. B. K. Yount, formerly assistant chief of the Army Air Corps who has recently been assigned to command the Panama Canal Air Force; Maj. Gen. James E. Chaney, Air Defense Command, Mitchell Field, N. Y., and Capt. Gordon P. Saville, Air Corps, Air Defense Command, Mitchell Field.

## Planes for Sweden Taken Over by U.S. for Defense Needs

Requisitioning of 110 airplanes manufactured in the U. S. for export to the Swedish government has been announced by the War Dept. following failure to obtain their transfer through negotiation.

The 60 EP-1 pursuit ships and 50 2-PA light bombers built by Republic Aviation Corp. were taken over under authority of the Act of Oct. 10, 1940 authorizing the President to requisition certain articles and materials for use of the U. S. for purposes of national defense.

The War Department declared the warplanes to be urgently needed by the Army Air Corps for advanced training.

## Seifert to Active Duty

Maj. Frank W. Seifert, for the last two years special liaison representative of Ryan Aeronautical Co. at Washington and Dayton, has returned to active duty in the office of the assistant secretary of War. Earlier this year Seifert was awarded the Distinguished Flying Cross.

## Rushing Production on the P-38



The factory of Lockheed Aircraft Corp. at Burbank, Cal., is now rushing production on a large order of P-38 twin-engine interceptor pursuit planes. Seated in the cockpit above is Marshall Headle, veteran test pilot who put the plane through its initial flights. The P-38 is reputedly capable of a top speed of 500 mph.

## ★ WEATHERHEAD ★

Dural Air Corps and Navy pipe and tube fittings: flexible hose for fuel and oil lines, instrument lines and hydraulic applications; drain cocks, valves and special accessories.



**THE WEATHERHEAD COMPANY**  
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## News in Pictures



Seen at the speakers' table at the recent Postmasters Convention in Columbus, O., were, left to right: Postmaster McCarthy of San Francisco; James A. Farley, former Postmaster General; Algy Murphy, postmaster at Troy, O.; Paul Younts, national chairman; Ex-Gov. Davey of Ohio.



The Associated Willkie Clubs of Pennsylvania recently christened an all-metal Luscombe Silvalre "The Willkie Vay," and Bill Mason with Joseph Carpenter, World War Pilot, took off on a state-wide campaign tour. The air bombed Pennsylvania towns for three days with Willkie pamphlets. The Luscombe is painted a brilliant red, white and blue and is powered by a 75-hp. Continental engine. Left to right: Carpenter, cardboard figure of Wendell Willkie, and Bill Mason.



Ray Noble, orchestra leader, is shown photographing the first recording of his test tune, "From Oakland to Burbank" while Stewardess Bernice Wier and Capt. C. Gilbert Sperry of United Air Lines look on. Noble was spired to write the tune when he had his hand commuted by United airmen between Oakland and Burbank this spring to keep running engagements in both San Francisco and Los Angeles.



B. F. Stanton, superintendent of Alliance, O., public schools, C. G. Taylor, president of Taylorcraft Aviation Corp., and Richard H. Depew Jr., vice-president, pick a Taylorcraft 1940 Deuce model for background as they view records of aircraft workers enrolled in the recently concluded summer pre-employment classes offered under the national defense training program in cooperation with the Ohio State Board for Vocational Education. Ant foremen and inspectors instructed 64 persons along five lines—aircraft sheet metal, metal fittings, wiring and finishing, wing assembly and primary assembly. Already 20 of the participants are on Taylorcraft's payroll.

## NAA Announces Nation-wide Campaign To Advance Civil and Military Aviation

Four main objectives in a nation-wide program to aid U. S. air defense and maintain civil aviation through the military crisis have been announced by Capt. Gill Robb Wilson, president of the National Aeronautic Association.

The program includes efforts to awaken the nation to a full realization of the ultimate role of civil air service and the essential part of air power in national defense; to organize community support for national air defense; to aid in the development of sound legislation and administration

for the advancement of civil and military aviation; and to encourage all phases of aviation activity.

Endorsement of the NAA program has been received from Army, Navy and aviation officials, including Assistant Secretary of War Robert P. Patterson and Maj. Gen. H. H. Arnold, chief of the Army Air Corps.

Patterson stated that "the War Department is in thorough accord with the objectives laid down in the program and will do whatever it can to further the achievement of these objectives."

## Meigs Named to Air Post Under Knudsen

Merrill C. Meigs, publisher of the "Chicago Herald and American" and well known flyer, has been named head of the aircraft division of the production department of the National Defense Advisory Commission under the direction of William S. Knudsen.

Meigs succeeds Dr. George J. Mead, former United Aircraft executive, who asked to be relieved in order that he might engage in research in his capacity as a member of the National Advisory Committee for Aeronautics.

## New Directory Edition Scheduled November 15

The revised and greatly enlarged Fall Edition of AMERICAN AVIATION DIRECTORY is scheduled for publication on or shortly before Nov. 15. Because of a limited printing, much of which has already been reserved through annual subscriptions, companies and individuals are urged to enter orders at once.

The editors of the Directory point out that due to rapid expansion throughout the industry it has been necessary to make between 1,100 and 1,200 individual changes to bring the Spring Edition completely up to date for Fall publication.

In addition, material has been solicited from hundreds of companies not listed in the Spring issue, resulting in several new sections which add more than 100 pages to the book and over 4,800 new names in the alphabetical index.

## Aero Chamber Reorganizes Public Relations Committee

Public relations committee of the Aeronautical Chamber of Commerce has been reorganized and expanded to deal with increased public interest in aviation. A. M. Rochlen of Douglas Aircraft is chairman, L. D. Lyman of United Aircraft, vice chairman, and Howard Mingo, Chamber vice-president, is secretary.

Other members of the committee are S. A. Hedberg, Aviation Manufacturing Corp.; F. R. Neely, Bell Aircraft; Herbert Sharlock, Bendix Aviation Corp.; James P. Murray, Boeing Aircraft; E. N. Gott, Consolidated Aircraft; H. E. Lawrence (alternate, Mark E. Neville), Curtiss-Wright Corp.; John M. Rogers (alternate for A. M. Rochlen), Douglas Aircraft; Thomas H. Corpe (alternate S. W. Voorhes), Lockheed Aircraft; Leland R. Taylor, North American Aviation; William A. Forbes, Platt-Forbes Inc.; J. A. Fitz (alternate, Harris Hull), Sperry Gyroscope; and T. C. Sullivan, Vultee Aircraft.

John C. Ingram has joined the Chamber's information department.

## Calendar

Oct. 31-Nov. 2—National Aircraft Production Meeting and Engineering Display of the Society of Automotive Engineers, Hotel Biltmore, Los Angeles, Cal.

Nov. 7-8—SAE National Fuels & Lubricants Meeting, Hotel Mayo, Tulsa, Okla.

Nov. 8—90s Dinner Dance, St. Regis Hotel, New York, N. Y.

Nov. 22-24—2d Annual Snowbird Glider Contest, Harris Hill, Elmira, N. Y.

Nov. 29-Dec. 2—Air Line Pilots Association, Annual Convention, Congress Hotel, Chicago, Ill.

Dec. 17—Wright Brothers Lecture for 1940, by Dr. Sverre Pettersen.

Dec. 17—Dedication of Washington National Airport, Washington, D. C.

Jan. 6-10—Annual Meeting and Engineering Display, Society of Automotive Engineers, Book-Cadillac Hotel, Detroit, Mich.

Jan. 10-12—1941 All-American Air Meet, Miami, Fla.

Jan. 29-31—Ninth Annual Meeting of the Institute of the Aeronautical Sciences, Columbia University, New York, N. Y.

Feb. 15-23—Sixth Annual National Sportsmen's Show, Grand Central Palace, New York, N. Y.

## Plastics Problems Defined Before Aircraft Engineers

The future of plastics, in aircraft as in other industries, lies in the ability of engineers to design parts suitable for plastic production, declared John Delmonte, research engineer and technical director of Plastics Industries Technical Institute, before a dinner meeting of aircraft engineers and plastics manufacturers in Los Angeles.

"At present," Delmonte emphasized, "the two greatest needs in aircraft construction from the plastics industry are materials with a high modulus of elasticity and preferably higher tensile strength, and materials with a controllable, low rate of creep."

"When these not impossible features are attained, without any sacrifice in specific gravity," he continued, "there will be little hesitancy on the part of airplane manufacturers to incorporate the materials widely in construction."

## W. J. Sanderson Resigns Canadian Aviation Post

Resignation of W. J. Sanderson as director of the aircraft construction division of the Canadian Department of Munitions and Supply has been announced by C. D. Howe, munitions minister.

Sanderson is expected to return to his position as president of Fleet Aircraft Ltd.

## This Changing World

Paulo Einhorn, Pan American's able and effective public relations manager at Rio de Janeiro, is responsible for this true story: When Russia moved into Rumania, families who were separated by 50 miles within their own country suddenly found themselves separated by 50 miles in two countries. Mail communication ceased. The only way one part of a family could send mail to relatives just 50 miles away, but now across the border in Russia, was via air mail to Rome, thence by air to Natal, Brazil, via the Italian trans-Atlantic line, thence to Rio de Janeiro, then to the U. S. via Pan Am, thence across the U. S. on a domestic airline, thence across the Pacific via Pan Am, and across Siberia, where, presumably, the letter reached its proper destination.

## Off the Beam

EVERYWOMAN'S MAGAZINE, in a recent issue, has a story on stewardesses by Dorothy Carlyle who in private life is the wife of Frank Brunton of American Airlines' publicity department.

DESPITE THE ARMY building adjacent to Orlando, Fla., Municipal Airport, Bill Lazarus, co-director of Orlando's department of aviation, is anxious that it be known that itinerant private flyers are most welcome and will be well taken care of as in the past. In fact, Orlando is looking forward to a big season this winter with the usual hospitality extended to all private flyers from up north.

J. L. WEAVER of Consolidated Aircraft is the designer of a new "pancake" engine weighing 115 lbs. which can be mounted directly into the wing section of a plane. Claiming that the engine can be manufactured for half the cost of engines now in use, Weaver says the powerplant is a geared, air-cooled, two-cycle, four-cylinder, horizontal opposed type. Two cylinders fire simultaneously from opposite ends of the five-inch crankshaft.

EVERY MONTH or so the postman delivers an oversized parcel from Ed Bern, director of public relations of American Airlines. The package is always crammed with a current collection of publicity results by Bern and his organization—an endless quantity of publications containing photos and articles having a tie-up with American. Then there is the usual collection of rotogravure sheets showing that good airline photography finds a ready newspaper market. Bern's prolific publicity production is overwhelming.

SEN. ROBERT R. REYNOLDS (D. N. C.), probably the most widely traveled Senator, went through Buenos Aires in mid-October, having flown down on Panagra. He took a three-day boat trip up the river to Ascension, capital of Paraguay, and then went to Sao Paulo and Rio de Janeiro, from which point he was to fly over the new cut-off route to Miami. Reynolds had one suit, a tan gabardine and three shirts, including a red wool one, plus a tooth brush and razor. The Senator says he believes in traveling light. With not much more than a brief case, and staying away from formal affairs and calls, he was seeing the country in a way few Americans see it.

GOSSIP has it that several new pursuit jobs now on the boards at various plants will use the new Continental V-12 instead of Allison. New "flying wing" pursuits are said to be in the drawing stage at Curtiss-Wright's St. Louis division and at Northrop Aircraft. The latter's pursuit will be entirely of magnesium alloy.

HARRY D. COPELAND of the fourth regional office of the CAA at Ft. Worth, Tex., writes in response to the recent item in this column about Dick Depew still being in the running as an active pilot. "His quip about not wanting to be the best pilot but having a hankering to be the oldest is already semi-famous," writes Copeland. "Dick and I seem to be running parallel in several ways," he continues. "We've both played with 'ham' radio since way back when; his last name and my middle one are the same; we both made our initial solo flight in Aug. 1911; and we both still hold active pilot's certificates." Depew soloed 12 days ahead of Copeland. The latter flew an old bamboo outrigger Curtiss pusher at Detroit on Aug. 23, 1911. "Believing whole heartedly in the slogan that there are old pilots and bold pilots but no old bold pilots, I've been at it continuously ever since and keep and use CAA Commercial Certificate No. 444 and current Air Corps Reserve 'pilots' rating."



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THE EMBLEM of Consolidated becomes more and more a symbol of American defense as ship after ship takes to the air to strengthen the nation's armed forces on sea and land.

**CONSOLIDATED AIRCRAFT CORPORATION** ★ San Diego  
ESTABLISHED 19

## C. I. Stanton Named Ass't Administrator; Stockburger with CAA

Charles I. Stanton, director of the CAA's bureau of federal airways, was named Assistant Administrator of Civil Aeronautics on Oct. 19.

CAA Administrator Donald H. Connolly at the same time announced the appointment of Arlin E. Stockburger, former deputy mayor of Los Angeles, as administrative consultant.

Stanton is 47, a native of Massachusetts, a graduate of Tufts College and a civil engineer. A World War flyer, he has been associated with government agencies dealing with civil aviation since the day after his discharge from the Army on Dec. 17, 1918.

He was a test pilot for the air mail service of the Post Office Dept., then served as division superintendent, superintendent of supplies and repairs and superintendent of operations.

After an interval of four years in the engineering business, he returned to the aeronautics branch of the Department of Commerce as one of its first airplane and engine inspectors, and later transferred to the airways division.

Stockburger is 32, a native of Arkansas and a mechanical engineer who specialized in gas engines. He was a Signal Corps lieutenant during the war, and is said to have helped work out the first telephonic communication between an airplane and the ground. After the war he managed ranch and oil properties in Arkansas and Oklahoma, and served as mayor of Silem Springs, Ark.

In 1924 he moved to California as city manager of South Pasadena, Alhambra and Ventura. From 1934 to 1939 he was director of finance for the state of California, when his connection with the city of Los Angeles began.

Stockburger was also associated with the State Planning Commission, State Personnel Board, State Board of Control, State Lands Commission, Bay Bridge Authority, Central Valley Water Authority and the Retirement Boards for teachers and state employees.

## Banks Stand Ready To Handle Defense Construction Loans

With Congressional passage of the excess profits bill, the way has been prepared for commercial banks throughout the country to make extensive loans to manufacturers for emergency plant construction.

A recent test survey conducted by the Federal Reserve System for the National Defense Advisory Commission indicated that commercial banking institutions stand ready to lend at least \$3,000,000,000 and that available lending capacity is several times the amount believed required for building emergency production capacity.

Authorization of the assignment of claims against the government permits manufacturers to use a new form of contract developed by the defense commission as security for borrowings needed for construction purposes and works toward interest rates lower than those obtainable on the usual type of commercial loans.

## Committee on Federal-State Jurisdiction Proposed by Ryan

A committee composed of representatives of the National Association of State Aviation Officials, the CAB and the Administrator of Civil Aeronautics, to determine the boundary line between federal and state jurisdiction in aviation, was proposed Oct. 18 by CAB member Oswald Ryan.

Speaking before the NASAO in Louisville, Ryan warned that there should "not be permitted to grow up in this country a dual system of inconsistent and conflicting regulation to harass American aviation."

Ryan's proposal, for a committee made on behalf of the CAB, was widely hailed by aviation law experts at Louisville as being the first move made by the Board since its formation to decide federal-state jurisdiction.

Because Canadian Colonial Airways is challenging the Board's economic jurisdiction in a pending New York court case, Ryan did not discuss this field, but confined himself to safety jurisdiction.

"The difficulty arises when we undertake to determine the limits of our regulatory responsibility over air navigation that operates off the federal airways; for there our responsibility covers the rapidly increasing volume of unscheduled commercial air traffic that flies across state lines but does not use the airways and extends also to all air navigation which directly affects or may endanger this volume of off-the-airways air commerce," Ryan said. "Here is the twilight zone in the jurisdiction conferred by the Civil Aeronautics Act."

"Somewhere in that zone the power of the federal government theoretically ends and the exclusive jurisdiction of the state theoretically begins."

"Now the Civil Aeronautics Board does not undertake to say at this time where the boundary line of federal and state jurisdiction is located in that twilight area. That line can only be located with reference to jurisdictional facts which must largely depend upon the volume, character and location of flying activities outside the federal airways, and those facts have not thus far been determined."

"The Civil Aeronautics Board believes that this and other jurisdictional questions might very well be made the subject of study by a committee which would include representatives of this Association, the CAB and of the Administrator of Civil Aeronautics. That committee could undertake to explore both the facts and the law upon which the respective federal and state jurisdictions must depend."

### States Not Excluded

Ryan assured the NASAO that "while Congress, in the Civil Aeronautics Act, may be found to have extended its jurisdiction over a larger part of the aviation field than was ever before occupied by the federal power, it by no means follows that the states have been excluded from participation in the development of American aviation."

The states can assist the CAB by providing assistance in the enforcement of the Civil Air Regulations, Ryan said. "In order to establish a

legal basis for that assistance, it may be necessary for the states to re-enact the federal safety regulations and make them applicable to flying within the state, so that a failure to comply with the federal regulations would constitute a violation of a state law," he explained.

The need for development of a national system of airports "calls for important legislative action by the states . . . to enable municipalities and other political subdivisions . . . to establish, operate and maintain airports and to act in association with one another in the establishment of airports outside municipal boundaries; state laws to provide for state aid to airport development and to permit the acceptance of federal aid where such is provided; legislation for the protection of airport approaches against obstructions, and, finally, legislation to insure the proper regulation of airports, especially with respect to their location," he said.

"Here again uniformity of law is desirable, and we believe that the adoption of an up-to-date Uniform Airports Act will constitute an important step toward the promotion and development of civil aviation."

## Research Service Surveys Needs of Aero Industry

Five answers to the question, "What new product, process or material might industrial research develop that would be valuable to the aviation industry?" have been given the Research Advisory Service as the result of a survey of 34 industries based on 1,042 answers from outstanding industrial leaders.

Items concerning aeronautics were listed as follows:

1. A procedure for dispelling fogs locally over airports.
2. Material to which ice would not adhere, for use on airplane wings, highway surfaces, windshields, etc.
3. Improvements in methods of aircraft construction such as flush riveting or spot welding to achieve absolutely smooth external surfaces without introducing serious maintenance problems.
4. Lightweight, low cost accessories for aircraft engines, such as fuel pumps, ignition apparatus, starters and carburetors.
5. An airship of the gyration type that would land on top of a flat roofed building, or a small circumscribed space.

## Air Raid Precautions Bureau Formed in New York City

Air Raid Precautions Bureau of America, 30 Church St., New York City, has been formed to function as a clearing house for architects, engineers, consultants, manufacturers and related groups. As a public service, ARPB will disseminate free information to civilians and cooperate with local and military authorities regarding both personnel and facilities.

Director is Harold DeVries, with associates J. Leopold and D. Shulman.

## Three Leaders Get Goodrich Award



Tomlinson



Mosier



Nutt

Three leaders in aviation—O. M. Mosier, D. W. Tomlinson and Arthur Nutt—recently received the Goodrich Award for "distinguished public service" in ceremonies at the New York World's Fair in the B. F. Goodrich Co. arena. Mosier is vice-president of American Airlines; Tomlinson is vice-president in charge of engineering of TWA, and Nutt is vice-president in charge of engineering of Wright Aeronautical Corp.

## MAJ. GEN. ARNOLD TO GENERAL STAFF

Maj. Gen. Brett to Act as Air Corps Chief; Important Promotions, Assignments Announced

Maj. Gen. H. H. Arnold, chief of the Army Air Corps, has been named Deputy Chief of the War Department General Staff, and will be charged with the coordination of all matters pertaining to the Air Corps, the War Dept. announced Oct. 25.

It was also announced that Maj. Gen. George H. Brett, who has been on duty in the office of the Chief of the Air Corps, will act as Chief.

Because it gives aviation direct representation in the General Staff, Gen. Arnold's appointment is considered of importance in aviation circles.

Also considered significant is the "temporary" promotion of Maj. Gen. Delos C. Emmons, GHQ Air Force commander, to Lieutenant General.

This promotion, the War Dept. stated, "places the air combat forces on the same command status as that of the Lieutenant Generals at the head of the four field armies."

For the past year, the announcement pointed out, the GHQ Air Force, "because of the tremendous augmentation of the Air Corps, has had to perform the non-tactical duty of training combat crews—a function formerly performed at Kelly Field. The time has now arrived for the GHQ Air Force to return to its role of training as a tactical fighting force. It will operate under the recently created General Headquarters at the Army War College."

Other temporary promotions in the Air Corps include: to be Major General, Brig. Gen. John F. Curry, Air District Commander; to be Brigadier General, Col. Clinton W. Russell, Chief of Staff, GHQ Air Force, and to be Brigadier General, Col. John C. McDonnell, Col. John B. Brooks and Col. Carlyle H. Wash, all Wing Commanders. Maj. Gen. Curry will command the 10th Pursuit Wing, Hamilton Field.

Important Air Corps assignments include: Maj. Gen. James E. Cheney, in addition to duties as head of the Air Defense Command at Mitchell Field, is given command of the Northeast Air District, with headquarters at Mitchell. Brig. Gen. Oliver P. Echols, is assigned as Officer in Charge of Research, Procurement, Supply and Maintenance Activities of the Materiel Division, Air Corps, and also is named Commandant of the Air Corps Engineers School, Wright Field.

Brig. Gen. Carl Spaatz, assistant chief of Air Corps, is named chief of Materiel Division; Brig. Gen. Henry B. Claggett is to command the 6th Pursuit Wing, Selfridge Field, Mich.; Brig. Gen. Millard F. Harmon will command the 7th Pursuit Wing, Mitchell Field; and Brig. Gen. Lewis H. Brereton will command the 17th Bombardment Wing, Savannah, Ga.

## Glenn L. Martin Given Guggenheim Medal

The Daniel Guggenheim Medal for 1940 has been awarded to Glenn L. Martin, president of the Glenn L. Martin Co., Baltimore, Md.

Presentation of the award "for contributions to aeronautical development and the production of many types of aircraft of high performance" will be made at the Honors Night dinner of the Institute of the Aeronautical Sciences in New York on Jan. 26, 1941.

### ATTENTION

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Box 318 American Aviation



## NASAO

(Continued from page 1)

developed to the fullest extent as a necessary part of preparation for national defense.

"Be it therefore resolved that the National Association of State Aviation Officials deplores the current military trend to curtail permanently or temporarily eliminate civil aviation on certain civil airports of this nation, and

"Be it further resolved that this Association believes the military services should proceed at once to the establishment of sufficient military airports with a view to returning to civil aviation the full and unrestricted use of such civil airports at the earliest possible moment, and

"Be it further resolved that the president of this Association designate a committee to secure from the several federal agencies complete cooperation to this end," the resolution read.

### CPTP Attacked

The CPTP is of "negligible military value," the NASAO said, adding that the "deficiency of the program" is further emphasized by the fact that the military operations of the U. S. "do not include or contemplate the use of aircraft of less than 200 hp."

All air carrier operations, either scheduled or non-scheduled, "require pilotage experience comparable to the military, which therefore makes it appear that the CPTP provides no reservoir for civil air commerce," the Association noted, stating that "the interests of private flying are not best served under the present maximum age limit of 26 years." The CPTP should be geared to the above needs, it concluded.

Capt. Marc A. Mitscher, Assistant

Chief of the Navy's bureau of aeronautics, had told the convention that the Navy has received only three students from the CPTP, and that the Army has received "not many more."

### Few in Military Service

The few CPTP students received have been "above average" flyers and have required less training, Capt. Mitscher said, adding, however, that CPTP students generally "apparently don't care to volunteer for military service."

He also stated that it has been the experience of the British that it is unwise to train men in planes of less than 200 hp.

Grove Webster, acting director of the CPTP, was scheduled to speak before the convention on Oct. 18, but wired that he would be unable to be present. Charles Cox, CPTP representative in Chicago, spoke in his place. Several NASAO members had planned to question Webster on the merits of the program.

The resolution concerning the independence of civil aviation was as follows:

"Whereas the NASAO has long and consistently advocated an independent federal agency for the promotion and regulation of aeronautics,

"Be it resolved that the NASAO go on record again as being unalterably opposed to any deviation from this principle, and in this connection we urge Congress to take such affirmative action from time to time as may be necessary to insure the complete independence of this branch of government,

"And we further urge Congress always to give full consideration to the unusual character and extraordinary and ever-moving advancement of the art of flying by never tying its control in whole or in part to other forms of transportation."

### New Aero Chamber Members

Recent additions to membership of the Aeronautical Chamber of Commerce include Babcock Aircraft Corp., De Land, Fla.; Aeroproducts Division of General Motors Corp., Dayton, O.; Pacific Aviation Inc., Hawthorne, Cal.; Reynolds Metals Co., Richmond, Va.; Briggs Manufacturing Co., Detroit, Mich.; Diebold Safe & Lock Co., Canton, O.; Goodyear Tire & Rubber Co., Akron, O.; Sperry Products Inc., Hoboken, N. J.; Westinghouse Electric & Manufacturing Co., E. Pittsburgh, Pa.; American Eastern Corp., New York City; General Aircraft Corp., South Lowell, Mass.; Alabama Institute of Aeronautics, Tuscaloosa, Ala.; Cal-Aero Corp., Glendale, Cal.; Curtiss-Wright Technical Institute, Glendale, Cal., and New England Aircraft School, Boston, Mass.

### Canadian Employment Up

Employees in Canadian aircraft plants increased 20% in a recent four-week period, according to C. D. Howe, minister of munitions and supply, who indicated that more than 8,400 employees are now at work in seven Canadian plants, excluding Canadian Associated Aircraft, Ltd., which is assembling planes for the British government. In all, some 17,000 workers are engaged on various parts of the Canadian aircraft production program, it was said.

### Natural Rubber Still Vital

At least three years would be required to build sufficient synthetic rubber plant capacity to replace natural rubber in all tires manufactured in this country, John L. Collyer, president of the B. F. Goodrich Co., told businessmen in warning them against assuming that synthetic rubber offers an immediate safeguard against a possible shortage of the natural product.

## 1,600 Skilled Workmen Registered for Jobs

Sixteen hundred workers with selected skills used exclusively by the aircraft industry were registered at public employment offices when the Bureau of Employment Security of the Social Security Board surveyed the list of applicants at the close of August. All apprentices and helpers were excluded from the count.

Of the 1,600 applicants primarily qualified in aircraft occupations, 697 were mechanics, 304 were sheet metal workers, and 143 were final assemblers. An additional 290 registered workers could qualify as aircraft mechanics, although their primary skill was in some other occupation.

Largest supply of applicants for aircraft work was in California where 410 were registered. New York was second with 170, Pennsylvania and Texas following with 150 and 100, respectively.

### Aircraft Employment Rises

Employment in the aircraft industry during Aug. 1940 reached a new peak with an estimated 80,400 wage earners, according to Department of Labor figures. The total shows an increase of 4,700 over July and 56,400 over the 1937 average.

Using 1923-25 as 100, Aug. 1940 aircraft employment was 2872.2, compared with 2703.3 for July 1940, and 1413.5 for Aug. 1939.

Using the same index, aircraft pay rolls during Aug. 1940 were 2972.5; July 1940, 2635.4; and Aug. 1939, 11380.9. In both employment and pay rolls, aircraft showed the largest gains among industries listed.

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## Fortnightly Review

(Continued from page 1)

We have consistently under-estimated South America. Our tourist travel and our trade relationships have been with Europe instead of with our logical neighbors. Today the United States is becoming aware of Argentina, Brazil, Chile, Peru and the other important nations to the south. But we are starting out mighty late to cultivate the countries we ignored for so long. It is all well and good to show the big stick and to establish air and naval bases at strategic points, but this is not accomplishing the all-important mission of trade development. And without cultivation of trade, our efforts to win South America will not be to much avail.

Among the many fallacious ideas we have are two that come to mind at the moment. One is that if Hitler loses the war, then South America is won for us. The second is that South America will have to trade with us for lack of any other choice.

To take up the first point, we have often failed to realize that Great Britain has long found a valuable market in South America, especially with Argentina. Great Britain has always been our foremost opponent in Argentina. The only difference between Germany and Great Britain, insofar as our trade relationships are concerned, is that Great Britain is an opponent in the same game with pretty much the same rules. Germany plays a different game with different rules. As between the two countries, the logical choice, of course, is Great Britain. Our approach has been completely out of line with the South American way of doing things, and the attitude that we have invariably had—"either do things as we say or call the game off," isn't going to get very far.

If Hitler wins the war, the United States will come in for many surprises in South America. The German approach will be economic trade, and the Germans have paved the way for generations. The backlog of experience, the desire to please the South Americans, is a tremendous advantage. If Great Britain wins the war we still have our trade to develop, and the way to develop trade is not by blindly lending huge sums of money without any understanding of the economic machinery by which those loans can be repaid.

The second point referred to above is a typical American generalization based upon our tremendous material wealth. The United States is not beloved in South America, and for quite good reasons. South America, it is true, will have to trade with the United States if there is no other source of necessary products, but this is a temporary situation, and unless we make positive approaches to trade cultivation, whatever South American markets have come to the U. S. during the war will soon go elsewhere once the war is over and products are available in Europe.

It is often said that South America has no products to offer us that aren't duplicates of what we already produce. To some extent this is true. But to close the door on this generalization is ridiculous. The total exportable meat products of Argentina amount to about three per cent of the total meat consumption of the U. S., yet there was a terrific outcry

by the U. S. meat producers at the thought of importing Argentine beef. We must find sane economic avenues of getting dollars to South American countries on a trade basis. If we don't, we will have missed the one and probably only chance to develop and cultivate trade with the South American nations. Hemisphere defense is meaningless without an economic backbone. The future of U. S. aviation in the Americas is interwoven in this international economic pattern. It is time for real thinking and action.

## City of Brotherly Love?

ONE of the great municipalities of the eastern seaboard, the City of Brotherly Love (otherwise known as Philadelphia), is demonstrating its great human affection for mankind by as fearful and wonderful a conduct of its new airport as has ever been known.

After several years of laborious, if confused development, the big new airport south of Philadelphia's Navy Yard was thrown open for airline, military and (supposedly) civilian flying not so many months ago. But immediately it was apparent that experienced aviation control of this fine field was to be a hollow gesture.

Colonel J. Victor Dallin, Royal Flying Corps pilot of World War I, and a veteran of aviation in continuing effort during the ensuing years, was placed in charge. Placed in charge? Perhaps it might better be described as put in chains, for Dallin's experienced views on the proper management of a great municipal airport were overshadowed by the political control of one John Neeson, Philadelphia's Director of Public Works, whose long service to aviation consisted of watching planes take off and land at the new field.

United Air Lines had its experience when the economy program set up by Neeson closed the traffic control tower between midnight and morning, inasmuch as insufficient men were hired to man the tower. The director of aviation for West Virginia had his experience in the surly reception accorded him when he landed to seek service and storage for the night.

These were but a few of a constant series of experiences in the Neeson-controlled airport, while Dallin (who has since resigned to become head of Pennsylvania's Division of Aviation), was forced to stand helplessly by, his hands tied.

Visiting pilots coming in to land at the Philadelphia Airport must whistle for any services they may require. After many months of operation, it is a day's work to get gas and oil, and the only hangar on the field is one owned and used by the National Guard squadron. The administration building, constructed with little intelligent foresight, is conducted in a confused manner, and thus far no long-term leases have been signed for restaurant service, government offices, or other essentials to a well conducted airport.

It would seem to be about time for Philadelphia's city fathers to look about them at the smooth operations of other great municipal fields. Perhaps the City of Brotherly Love is just testing the aviation fraternity to see how far it can carry stupid blundering before patience is exhausted. But if a great municipality is going to do its part in affording the American aviation picture its requisite attention, it is high time political mismanagement gives way to intelligent, experienced operation.

## How to Lose Funds, Etc!

THE State of New York, in its avowed intention to compete with private schools engaged in the training of aircraft mechanics, is certainly going about the business of how to lose funds and alienate taxes in a big way as possible.

Free training by the Empire State, for thousands of young men, is contemplated in plans now under development, but no thought is being given to the many schools maintained by private investment, schools whose taxes will help to build destructive governmental competition if the New York plan is carried through.

W. D. Guthrie, president of Roosevelt Field, has taken the lead in an effort to combat this manifestly unfair scheme. As he points out, the Roosevelt Field school and many others have been engaged for years in the training of mechanics, and if public funds are to be used for such training it would appear logical that first consideration be given to already existing qualified training schools.

If the politicians are seeking to kill the goose that lays the golden egg, they are on the right track in New York State, for should the state compete with the taxpayer and put him out of business, the resultant loss of tax returns must inevitably prove the futility of such paternal projects.

School operators must be given the help they deserve, as contributors to the public purse, instead of having free governmental training centers set up in direct competition. Let the State of New York take a leaf from the Army Air Corps program for the training of both pilots and mechanics, where existing schools are employed.

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## Capital Notes

CONGRESSIONAL INVESTIGATIONS in the name of national defense will break out like a rash on Capitol Hill next year according to symptoms already visible. Some of these will be sincere and genuine attempts by serious-minded members to satisfy their sense of responsibility that the federal officials charged with the conduct of the defense program are making efficient progress, or that industry is cooperating in an orderly and unselfish fashion, or that the program itself is adequate and sound. But others will be instigated by less patriotic motives. The outcome of the election will of course have its effect on this investigatory fever, but will hardly reduce the number of Congressional inquiries. And no matter whether promoted by fair concern or otherwise, participants in the defense program may as well begin now to sort their files and prepare for the inevitable.

A Congressional committee has broad authority. It can, for instance, look into any matter it chooses within the scope of the resolution under which it acts—and on grounds of suspicion alone, a power denied a grand jury.

One such resolution already approved by the Senate provides for a wide-sweeping investigation into almost any aspect of national defense by the Senate Interstate Commerce Committee, headed by Sen. Burton K. Wheeler, of Montana. When the Senator found his measure somewhat coldly received on the Senate floor recently, he withdrew a request for \$50,000 expense money, thus achieving acceptance of his plan. Subsequently, he has asked Thurman Arnold's anti-trust division in the Justice Department, the Defense Commission and the SEC to prepare data as a basis for public hearings next January when he hopes to spotlight all defense companies which have foreign connections of any kind. He feels confident Congress will provide the necessary expense budget at that time. But the foreign phase will be only the beginning. Under the loose language of the resolution, he may also—and has so stated—investigate patents, licensing agreements, prices and other general or specific corollaries of defense production. If successful in his plans, his show will be spectacular.

\* \* \*

MASS PRODUCTION OF AIRCRAFT parts by the automobile industry will get underway when contracts are let next Spring for manufacture of 12,000 of two standardized types of heavy bombing planes. In the interim the aviation and motor car industries will cooperate in working out an effective program under the direction of Defense Commissioner Knudsen. Plans so far do not envision production of completed aircraft by any automobile company, but rather a diffusion of parts among those companies which may have factory facilities available and adaptable to the work.

Congress will be asked early in the year for funds to purchase large numbers of additional aircraft including close to 20,000 for the Army Air Corps. Since money has already been appropriated for 35,000 planes—25,000 for the Army and 10,000 for the Navy—the total strength of the air services would thus be brought up to the President's recommendation of 50,000, with a sizeable balance to offset obsolescence, replacements, or possible "diversions."

Aviation manufacturers are naturally concerned over the government's invitation to the automobile industry to enter the airplane field. But early reactions show no signs of hysteria or unreasonable fear of competition. The size of the procurement program indicates there should be plenty of business to go around and since speed is the keynote of the defense effort, aviation leaders are expected to cooperate.

\* \* \*

THE AIRPORT EXPANSION PROGRAM is not expected to get underway for some weeks yet pending a final selection of the 250 airports to be built or improved by the War-Navy-Commerce committee. The identity of those representing the departmental secretaries on this committee has been kept as quiet as possible to avoid political pressure for special consideration of possible sites. It is generally understood that the bulk of the \$30,000,000 provided will be spent on Pacific and Alaskan bases and airfields along both U. S. seacoasts, particularly in metropolitan areas where heavy airline traffic is overcrowding existing facilities.

\* \* \*

FEDERAL AVIATION PERSONNEL CHANGES over the past two weeks include the resignation of Dr. George Mead as chief of Defense Commissioner Knudsen's aircraft division and his replacement by NAA board member and Hearst executive Merrill C. Meigs, of Chicago; appointment of Maj. Gen. Henry ("Hap") Arnold as a Deputy Chief of Staff, succeeded by Maj. Gen. George H. Brett as acting Chief of the Air Corps; and resignation of T. P. Wright as an aviation adviser to the Defense Commission. Dr. Mead returns to NACA and Mr. Wright, who made an enviable reputation during his Washington service, to Curtiss Wright. He retains his place on the joint aircraft standardization board.

\* \* \*

RECOGNITION OF THE AIRLINES as an important arm of national defense is illustrated by the swift action of the National Defense Advisory Commission in setting up a priority on tools and machine equipment requested by several airlines for next year's maintenance operations. Only those industries whose activities are most essential to the defense interests of the country are allowed preference ratings on machine tools because of the bottleneck in tooling. Army officials have previously stated that, in event of emergency, the airlines will be called upon for important troop transport and dispatch service.



## Folks Worth Meeting—

LITTLE in common may be found between the Vaughan Runabout, a \$4,600 automobile advertised in newspapers back in 1908, and smooth fighting planes of today, and little relationship there is, except perhaps as experience links in the life of Guy W. Vaughan, president of Curtiss - Wright Corp.

Few will remember the Runabout designed by young Vaughan, then racing experimental cars against Barney Oldfield, Louis Chevrolet, Frank Leland, and other road champions. But today no production study on fighting planes, air-cooled engines and propellers would be complete without balancing the influence of Guy's direction and vision.

Guy completed his high schooling at New Rochelle, N. Y., back in the 90's when the airplane was still an idea in the minds of the Wright Brothers and the "horseless carriage" was just making its appearance. He went to work for the Desberson Motor Co. of New Rochelle as a mechanic by day, and studied engineering by night. Soon he left Desberson to join the Standard Automobile Co. and when that organization imported the Decauville Racer, Vaughan, then 18 years old, was selected to drive it. Promptly he won the Gordon Bennett Race, and during the five succeeding years he competed on Eastern tracks, chalking up a world's mark for driving a car continuously for 24 hours.

Subsequently, as assistant to F. B. Stearns, president of F. B. Stearns Co., and as experimental engineer aiding development of the Knight engine, Guy learned the business of manufacturing automobiles, principles later proved

applicable to the aviation industry. He learned the value of research in foreseeing trends, the importance of tested developments as against spectacular novelties. He found standardization of parts and assemblies essential to low cost production, and he recognized the role of coordination in successful business enterprise.

With the world at war in 1917 and the infant aviation industry receiving feverish attention, George H. Houston, president and general manager of Wright-Martin Co., New Brunswick, N. J., offered Guy the job of company quality manager. Guy took over, and the company which by July 1917 had shipped less than 100 of a French order placed in 1916 for 450 aircraft engines, in 1919 was operating under a 2,000 unit monthly schedule.

Guy became factory manager of Wright Aeronautical Corp. in Sept. 1924, to figure prominently in producing the first of the Wright engines, and the following year he was named vice-president-general manager. Among his early contributions was introduction of a plan for producing the Wright Whirlwind J6 Series in which component parts of three engines of widely varying horsepower were made 95% interchangeable.

With formation of Curtiss-Wright Corp. in 1929, Guy was elected president of Wright, and anticipating world-wide expansion of air transport services, and the need for larger, more powerful engines, he intensified the development and production rate of Wright Cyclones. As president of Curtiss-Wright since 1935 he has emphasized research, partial results of which are reflected in the new 2,000-hp. Wright Duplex Cyclone, the formidable Curtiss P-40 pursuit fighter and the Curtiss XSB2C-1 dive-bomber. Under his direction today, seven C-W factories are in mass production, turning out Wright engines, Curtiss combat planes, and Curtiss propellers, with two more plants under construction and four additional already planned.



Vaughan

## More Restrictions on Civil Flying at Airports Forecast by McMullen

Civil aviation activities, particularly flight training, are expected to be forced off many existing airports as the result of policies tentatively adopted by Army, Navy and Commerce officials. Maj. A. B. McMullen, chief of the CAA's airport section, told the 10th annual convention of the National Association of State Aviation Officials in Louisville on Oct. 18.

Maj. McMullen stated that these policies are as follows:

1. That no new airport should be developed within six miles, center to center, of any existing airport, or on, or within two miles of the let-down legs of a radio range or instrument landing beam, if within 10 miles of the radio range station.

2. That municipal or civil airports occupied by flight training units of the Army or Navy will not be regularly used by civilian aviation.

3. That municipal or civil airports occupied by the combat or tactical units of the Air Corps may be used jointly by the scheduled air carriers inasmuch as all combat aircraft are now equipped with two-way radio and are, therefore, subject to radio airport traffic control.

"This may not be such cheerful news to some fixed base operators and private flyers," Maj. McMullen said. "It will probably result in some loss of income to them as well as many inconveniences." He added that they should consider the inconveniences as their contribution to national defense.

"The occupation of civil airports by service squadrons and groups immediately provides the Administrator with two important jobs," he said. "The civil airports occupied or taken over by the military, together with all others that might be used in an emergency, must be expanded where necessary and many of them improved in such a manner as will permit continuous operations 24 hours a day regardless of weather or visibility. The second job . . . will be development of new fields for displaced civil aviation activities. Federal authorities should, in my opinion, and I feel certain will, do everything possible to avoid more than temporary interference with local civilian flying."

Concerning the \$40,000,000 recently appropriated by Congress for not more than 250 airports, Maj. McMullen revealed that the following three classes of fields will receive consideration for immediate development:

1. Those located in the strategic areas where a large number of squadrons, groups and other units of the air force might be based in any given military situation.

2. Civil airports that are now or will be occupied by training or combat units of either the Army or Navy air forces, and new airports necessary to relieve traffic congestion at these ports by separating military and civil activities.

3. A limited number of airports along the existing civil airways and proposed military air routes connecting the various strategical areas and the east-west coasts. "It is doubtful if many, probably none, of the airports in this group will be reached during this fiscal year," he said.

Maj. McMullen stated that in his

opinion too little attention has been devoted to the design and construction of underground hangars. "The possible necessity for underground hangars and other shelters and the camouflaging of both shelters and landing areas should be kept in mind in selecting new sites and in preparing plans for the extension or improvement of existing airports," he said.

Maj. McMullen also stated that "to expedite the task of expanding the present appropriation on those airports of greatest national defense value we are sharing our labors with others. The CAA is receiving the most gratifying cooperation in this work from other federal agencies such as the Forest Service, Public Roads Administration, WPA, CCC, NYA and others."

"No one can even estimate how far this help will 'stretch' the \$40,000,000 . . . made available . . . for the initial step of what we hope to be a long-range airport program."

Discussing this long-range program, the speaker stated that the CAA supports a system of 4,000 airports and landing fields, costing about \$558,000,000, exclusive of the cost of any land, buildings or engineering and administrative overhead. "In short, that amount is necessary for improvement of landing areas—grading, drainage, paving, lighting and navigation aids where necessary," he explained.

"As to buildings, a recent survey by the CAA leads us to believe that about 2,900 hangars and 1,400 other buildings will be needed within the next two or three years to provide adequate housing for civil aviation. And we figure that these buildings would cost in the neighborhood of \$70,000,000."

## Barlow Heads Texas A & M Aero Engineering Dept.



Barlow

Howard W. Barlow, former head of the department of aeronautical engineering at the University of Minnesota, has been appointed to head the new department in that subject at Texas A & M College. G. B. Gilchrist, dean of the A & M school of engineering, has announced. Before joining the staff at Minnesota, Prof. Barlow did aeronautical consultant work in Washington and had been a staff engineer for Glenn L. Martin Co.

The new aeronautical engineering department was established at Texas A & M recently and at present is the only such department in Texas. The degree of bachelor of aeronautical engineering will be conferred upon those students who successfully complete the course.

## Lightplane Altitude Mark Officially Set at 24,311 Feet

A new official world's lightplane altitude record has been officially set at 24,311 feet by Miss Grace Huntington, Pasadena, Cal., in a 65-hp. Taylorcraft.

The new record replaces the previous mark of 18,200 feet set by Miss Betsey Ross of Richland, Pa.

## Coed Courses Initiated



Following the enrollment of Miss Marie H. Dupuy as the first woman student for the aircraft mechanics course, Aviation Institute of Technology, Long Island City, N. Y., announced that it is the first U. S. aviation mechanics school to initiate coeducational courses, following the pattern of European countries. Frank Ambrose, president of the Institute and an outstanding figure in aviation for over 22 years, visualizes the possibilities in the field for women in sewing fabric covering and woodwork.

## New WPA Airport Projects

### Speeded for National Defense

Accelerated program of WPA airport construction was reported by Howard O. Hunter, acting commissioner of Work Projects, in recent announcement that 70 new projects representing expenditures of \$21,500,000 for construction or improvement of airfields were approved between July 1 and Sept. 21. To assure priority of the most essential, the War and Navy Departments have specifically certified nearly half of the number as important to national defense.

More than four-fifths of all airport construction of last five years has been accomplished by WPA, Hunter said, including improvement or construction of 176 of the 195 airports used for regular airline stops.

### Lightplane Building Estimated

Estimates that 7,000 lightplanes will be built in 1940 and that 1941 "could see this figure increased to 10,000-12,000" were made by C. G. Taylor, president of Taylorcraft Aviation Corp., Alliance, O., in an interview at the export conference of the Aeronautical Chamber of Commerce in Los Angeles.

## Air Youth Scholarships

Three scholarships for training in aviation are being offered through Air Youth of America, 30 Rockefeller Plaza, New York City, for instruction in the fall term of 1941 at United Air Lines' Boeing School of Aeronautics, Oakland, Cal., Casey Jones School of Aeronautics, Newark, N. J., and Spartan School of Aeronautics, Tulsa, Okla. Applications must be received by Mar. 1, 1941.

## Radio's 'Andy' Winner

Charles Correll, better known as "Andy" in "Amos 'n' Andy," has been awarded first prize in the annual ship air cruise of the Aviation Country Clubs of California.

The cruise consisted of a navigation contest in which each pilot, first taking into account winds, drift, altitude and other elements, estimated the cruising speed of his plane from Glendale to Del Monte, Cal., and then turned over all watches to the judges before taking off.

## Swallow Presents a Trainer



Having produced airplanes from time to time since 1919, Swallow Airplane Co. Inc. at Wichita, Kan., has introduced a new low-wing primary trainer, the LT65, powered by the Continental 65 and having a cruising speed of 100 mph. Fuselage is of welded steel structure SAE 4130X and integral with engine mount, having wooden fairing strips and fabric covering. Seating arrangement is tandem. Featured is the plexi-glass enclosure.

Wings attach directly to the center section and are braced by streamlined tie rods. Spars are of solid spruce construction. Steel wires are used in internal bracing. Airfoil section is Clark Y. Wings and center section is fabric covered; forward portion of the fuselage up to the sliding enclosure is of Dural construction.

Landing gear is of welded steel tubing construction. Shock absorbing unit consists of rubber in compression. Gear is fully faired and braced by streamlined tie rods and struts. Tread

is 62 in. Brakes are operated by bell pedals.

Center section of welded steel tubing construction forms an integral part of the fuselage.

Tail group is externally braced by tie rods and of welded steel construction, fabric covered. Elevator tab is located on the left elevator and controllable from the cockpit.

Maximum speed of the new Swallow is 115 mph.; landing speed, 40 mph.; climb in feet, first minute, 600; service ceiling, 12,000 ft.

Gross weight is 1,200 lbs.; empty weight, 650 lbs.; normal cruising range, 350 mi.; normal fuel capacity, 14 gal.; length overall, 21 ft. 9 in.; height, 6 ft.; span, 27 ft.; wing area, 126.6 sq. ft.

Standard equipment includes altimeter, oil pressure gauge, oil temperature gauge, tachometer, air speed indicator, first aid equipment, fire extinguisher, brakes.

The LT65 is priced at \$1,900 F.O.B. Wichita.

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## 'A Considerable Advance'



Lear Avia, Inc., in its latest automatic direction finder, model ADF-8, has accomplished "a considerable advance in the accuracy and positiveness of aeronautical navigation under all conditions of weather," according to the announcement. Manufactured under CAATC Nos. 345-350, the instrument simplifies the principle of operation to the point which requires only that the pilot switch to the desired frequency and tune to the required frequency. The ADF-8 then secures and integrates the information and gives the resultant answer. The instrument is available in two models, differing only in their frequency coverage.

## For Private Flyers



A new type aircraft radio receiver that utilizes new circuits which permit the elimination of a number of tubes without sacrificing range or sensitivity of the receiver has been placed on the market by Electronic Specialty Co., Glendale, Cal. Weighing only two pounds, 12 ounces, it is said to be the only low-priced aircraft receiver built under American Telephone & Telegraph patents. Primarily designed for the private plane owner, the "Ranger" receiver as it has been named, may be easily and quickly installed, or removed from one plane and installed in another. With the receiver is a battery-pack that gives 200 hrs. of operation which can be mounted under the pilot's seat or any other convenient place. Price of the receiver, complete with battery-pack, tubes and ready for operation is \$25.

## New Developments Reported

Available from Bachrach Industrial Instrument Co., 7000 Bennett St., Pittsburgh, Pa., is sales literature covering recent developments in engineering for pressure, temperature and gas analysis instruments.

Empire State Plans  
8 Training Centers  
for Aircraft Workers

Establishment of eight training centers throughout the state of New York to supply semi-skilled workers for the aviation industry has been announced by Gov. Herbert H. Lehman, following recommendations made by Dr. Lewis A. Wilson, associate commissioner of education. The centers, expected to be in operation by Dec. 1, will be located at Utica, Watertown, Yonkers, Plattsburg, Elmira, Syracuse, Nassau County, and a site to be selected in southwestern part of the state.

The program to be supported by combined federal, state, and city funds, will, according to Dr. Wilson's report, be an "invaluable" aid to industry, and play an important part in the state's defense plans. During the coming year an estimated 10,000 will receive preliminary training in these centers, while it is indicated that state aircraft industries will need 52,000 workers in that period.

Under the plan, federal funds will finance supplies and training personnel, while local governments provide the classroom facilities and maintenance. New York state has already authorized a \$110,000 appropriation to furnish equipment for the schools.

Dr. Wilson declared that defense program experience demonstrated men could be trained for semi-skilled jobs in 8-10 weeks of intensive instruction.

(For comment on training program of New York state, see editorial page this issue, "How to Lose Funds, Etc.")

Philadelphia Airport  
Manager Quits Job

Lending credence to reports of behind-the-scenes friction with city officials, Lt. Col. J. Victor Dallin announced his resignation as manager of the new Philadelphia Municipal Airport in mid-October to become director of the Pennsylvania Bureau of Aeronautics. The action is believed generally to have resulted from tension arising from restrictions placed upon his managerial position by Director of Public Works John H. Neeson.

In resigning, Col. Dallin revealed a discussion with Mayor Lambertson concerning the airport in which he recommended that "a Bureau of Aviation be placed directly under the Mayor, to increase its efficiency," but that the Mayor "feels that so long as construction is incomplete, the management should remain in the hands of the Director of Public Works."

As state director, Col. Dallin succeeds William Schwarz who has accepted a private business offer. The State Bureau of Aeronautics supervises operation of eight state-owned airports, inspects and licenses the 111 municipal and privately owned fields, and maintains the 25 beacons on the state's major airways. Col. Dallin's new position pays the same as his old one—\$4,200 a year.

(See editorial, "City of Brotherly Love?" editorial page, this issue.)

Dexter Martin Heads  
State Aviation Group

Dexter C. Martin, director of aeronautics for South Carolina, became president of the National Association of State Aviation Officials at that organization's 10th annual convention, held in Louisville, Oct. 17-19. He replaces Douglas O. Langstaff of Louisiana.

Other officials include W. D. Hammond, chairman of the Utah State Aeronautics Commission, first vice-president; Asa Rountree, Jr., of Alabama, second vice-president; Lieut. Al Near, Kentucky, third vice-president; S. B. "Buck" Steers, Michigan, secretary-treasurer, and George B. Logan, legal counsel.

## New Building for C-W Tech

A \$50,000 program providing a 24,000 sq. ft. building for civilian air mechanic training has been announced by Maj. C. C. Moseley, president of Curtiss-Wright Technical Institute, Glendale, Cal. Curtiss-Wright's \$100,000 expanded Air Corps mechanic training center has been placed in operation. Record enrollment for the institute includes 1,200 civilians and 1,053 Army enlisted men.

New Deal Air Policy  
Flayed By Aero Club

Charging the New Deal with a basically unsound aeronautical policy, the Aero Club of Pennsylvania has issued a pamphlet entitled "Is the New Deal Truly Air-Minded?"

In accusing the Administration of mismanagement of aircraft matters the pamphlet points to the absence of a permanent chairman of the Defense Council, the presence of "fussing, red tape, and restrictions" in government contracts, the lack of a fixed policy toward the development of the aircraft industry, and the waste of money in the improvement of airports and landing fields.

To remedy the situation, the aero club makes three recommendations for basic changes in policy:

1. Simplification of standard combat aircraft to make real production possible and make military needs manufacturable.
2. Elimination of government inefficiency and duplication with regard to specifications and inspection.
3. Coordination of all aircraft activities under an independent administration for air power.

## Patrick Higgins Dies

Patrick Higgins, vice president and operations manager of Delta Air Lines, died on Oct. 6 after an illness of several months, at his home in College Park, Ga. He is survived by a widow and two children.

## Obituary

RAY BEBE, 37, manager of Hastings (Neb.) Municipal Airport and president of the Nebraska Aeronautical Association, died Oct. 7 at Hastings. He became sales manager for Rearwin Aircraft and Engines in Apr. 1938, but later that year went to Hastings.

CHARLES ANDREW MCCUNE, 61, research engineer and secretary of Magnaflex Corp., died in Atlantic City, N. J., Oct. 14.

## NASAO President



Dexter C. Martin

Of South Carolina, who will serve as president of the National Association of State Aviation Officials during the coming year.

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# War Brings Canada's Aerial Destiny Nearer

Now the Air Center of the Empire, the Dominion Expects to Enter the World Aircraft Market; Progress of Recent Years Enhances Country's Prestige

By E. L. CHICANOT

Author of "Canada Spreads Her Wings," "Civil Aviation in Canada," Etc.

IS THE peculiar contribution Canada is making towards the prosecution of the war in Europe destined to make her permanently the air capital of the British Empire? Certainly one cannot view present developments in the Dominion without reaching the conclusion that they will have far-reaching consequences when peace has been won and normal conditions again prevail. Today Canada is definitely the Empire's aerial center, and circumstances seem to be combining to fix her in that position for all time.

The attention of the continent is now focused on the Commonwealth Air Training Plan which got fully under way in Canada the past summer. It is a giant and significant undertaking in itself, but becomes considerably more so in view of its long-range implications. Implied, among other things, is a change in Canada's status from an importer to that of a large scale exporter of aircraft, as well as elevation to a standing of great importance in international aerial transportation.

Canada's location is clearly ideal from considerations of both the manufacture of aircraft and the training of men who are to use them. Situated midway between Britain and the Dominions of the Antipodes, she is receiving trainees from both. She is the closest Dominion to Great Britain, and at the same time the only one accessible by air without involving passage over a foreign country. Moreover, Canada is sufficiently remote from the main scene of hostilities to be reasonably safe from danger of bombing. Aircraft manufacturing can be carried on largely free from hazard, and similarly air training can be undertaken without fear of interruption. Completed planes may if necessary, be ferried across the Atlantic without extra fuel tanks.

## Expansion Traced

Studying the growth of aircraft manufacture in Canada, one finds that a modest but substantial industry, a nucleus of great potential expansion, was long in existence. It has largely been forgotten that during the Great War, the Dominion constructed some 2,900 planes. As air development got under way in the post-war period in Canada, the construction of aircraft and equipment adapted to the country's peculiar conditions and requirements followed. Several manufacturers began to produce original types of aircraft suited to Canadian operation, and other aircraft manufacturers from England and the U. S. established branches in Canada for the assembly and servicing of their products.

In recent years, the production of aircraft in Canada has risen sharply. In 1934 it was 18, valued at \$117,689; in 1935, 158, valued at \$479,614; in 1936, 109, valued at \$1,210,910; and in 1937, 110, valued at \$1,461,626. The extent of importations has, however, been almost equal to domestic manufacture, and in 1937, 77 aircraft valued at \$1,388,621 and 271 airplane engines valued at \$1,032,664 were imported,

almost entirely from Great Britain and the U. S.

Wide expansion of the aircraft manufacturing industry was assured even before the outbreak of hostilities when Canadian assistance was sought in Britain's rearmament efforts. Plans concluded by Canadian industrial concerns with the British government involved the placing of large scale and long term contracts for the manufacture of bombing planes, the preliminary order involving an expenditure of \$100,000,000. Nine of the Dominion's leading industrial concerns formed a central organization and began the building of plants.

The decision to make Canada an Empire training center to develop 15,000 trained pilots a year foreshadowed a tremendous impetus to manufacturing. The cost of the training plan has been set at \$800,000,000 over a three-year period, covering, in addition to land purchases, buildings, etc., the cost of planes. By the time the scheme is in full swing there will be 80 odd schools and depots in operation. Hundreds of aircraft are being required for training purposes, and an excellent opportunity is afforded for the testing of new types of machines.

## War Factor Vital

HOW long the training scheme with its huge annual output of trained airmen will continue, or how far the expansion of aircraft manufacturing will go depends entirely on the uncertain factor of the duration of hostilities. Be the war short or long, however, the plants erected and the technicians assembled for war purposes will remain in existence, to some extent at least; and Canada will not only be able to provide for her own requirements in aircraft but will enter the world market as well.

The Commonwealth Air Training Plan, now of such vital importance to the Empire's war effort, might never have been conceived and certainly could not have been put into operation so rapidly except for the progress of both civil and military aviation in Canada. Two training schools of the Royal Canadian Air Force, at Camp Borden and Trenton in Ontario, were rapidly fitted for training under the scheme. Moreover, across Canada were 37 municipal air harbors, located in every province and utilized by some 22 light airplane clubs, through which training organizations have been established, each capable of accommodating some hundreds of student-pilots.

Canada may have seemed to be backward in civil aviation because its development, taking a unique course, did not come generally to world attention. Instead of following along the lines of other countries in linking the principal centers of population, it allied itself with pioneer industry and set out to bridge the distance between civilization and the unexploited wilderness, carrying cargoes of precious metals, fish, peltry and other products to and from the otherwise inaccessible northern hinterland.

All the while, however, Canada had in mind aerial developments along the lines of most other countries, including inter-city services and a transcontinental system bringing her two distant coasts within rapid communication with one another. As a step in establishing a chain of airports across the country, and also in providing for the training of personnel, the government launched the flying club movement with offers of government grants and gifts of aircraft. Clubs were enthusiastically operating; many air fields had been built with others under construction and planned, and the first section of the trans-Canada airway was in operation when the depression slowed up progress, and aviation in Canada seemed to suffer a setback.

## Air Freight Soars

However, when a few years ago it was decided that the time was opportune for proceeding with the belated task of providing Canada with a national airway, the country could already point to an outstanding record of accomplishment in the field of aviation. The 30 commercial aviation companies then in existence had transported more freight by air than any other country, annually moving more than the combined plane services of the U. S., Great Britain and France.

A transcontinental airway, under government auspices, became an actuality in 1939 with the opening of a route from Moncton, New Brunswick, to Vancouver, British Columbia, a distance of 3,118 miles. Branch lines operated by Trans-Canada Air Lines now run from Lethbridge to Calgary and Edmonton, and from Vancouver to Seattle, while feeder lines operated by other companies connect the transcontinental line with other important communities, creating a considerable network. Lines running from the Canadian transcontinental to connect with U. S. air services are increasingly projected.

But Canada's transcontinental airway is of more than national significance. The Great Circle route, the shortest and most direct between the great industrial region of Europe through London to Montreal, passes via Newfoundland almost directly up the valley of the St. Lawrence. Similarly, the Great Circle route to the Orient from Chicago passes through Winnipeg, north of Edmonton, through Yukon, Alaska, across Bering Straits, down the coast of Siberia and through the Japanese islands. Once established, these routes possess such advantages that international mail will, in all prob-

ability, quickly turn to Canadian channels, and Montreal, Winnipeg and Vancouver will become important junction points on the future airways.

Part of this has already been realized, and Canada's transcontinental airway was projected not to serve Canada alone but as part of the elaborate system of British Empire air communications. During the summer of 1939 the flying boats of Imperial Airways, successfully crossing the Atlantic with mails, connected regularly with Trans-Canada Air Lines at Montreal, and the mail was carried on to points across the Dominion as far as the Pacific.

## Final Link Considered

Yet further prestige will attach to Canada and her transcontinental aerial route when the next and final link in the chain of inter-Empire airways is forged. While the Great Circle route to the Orient through Winnipeg was thought to be a possible development of only the remote future, fresh interest has been aroused from the announcement that Yukon Airways is negotiating with Russia for an airline to Vladivostok which would connect with the Canadian transcontinental line at Vancouver, through Edmonton and Whitehorse. Definitely in the offing for some time has been a line on the direct route across the Pacific from New Zealand to Vancouver, joining Trans-Canada Air Lines, and thus making possible a continuous air route of approximately 20,000 miles from Vancouver, through New Zealand, Australia and India, to the Motherland.

Thus the war has brought Canada's aerial destiny appreciably nearer. Having established a novel record in aviation within her borders, the Dominion is well on the way toward achieving developments in the air calculated to rank her with the most progressive countries and to make her an important factor in the aerial belt round the globe.

## Canada Reported in Move For Aircraft Engine Plant

The Canadian government is reported to be negotiating with an English aircraft firm to obtain patents and plans for a well-known British airplane engine with a view toward the establishment of an engine plant in the Dominion.

The move is designed to eliminate Canada's complete dependency upon aircraft engine importation. As yet the location of the plant has not been announced, although production is expected to get under way in a few months.

## Aviation Fraternalism

There is no love lost between enemy military pilots, but evidently a fraternalism still exists among commercial air pilots. Some time ago we related how commercial air services proceeded in Scandinavia during the early stages of the European war with planes of two warring countries flying peacefully in and out of neutral countries and with fraternalism among the commercial pilots of the two enemy countries. Today a similar situation exists at Cintra Airport outside Lisbon. Planes from London, Berlin and Rome converge upon Cintra Airport within a few minutes of each other three times a week. Although military pilots are bombing Berlin from London, and London from Berlin, the commercial services arrive and depart peacefully in the still neutral country of Portugal. There are even reports that the English, German and Italian pilots sit down for coffee together. Incidentally, KLM, Royal Dutch Air Line, is operating the British service from England to Portugal with DC-2 transports, thus relieving British pilots for important war work.

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## Douglas Places \$75,000,000 in Subcontracts With 12 Companies

Douglas Aircraft Co. on Oct. 25 announced that "within the next few days" it would place subcontracts in excess of \$75,000,000 with middleweight and eastern manufacturers.

Lion's share of the subcontract business will go to the Murray Corp. of America, Briggs Manufacturing Co., Fisher Division of General Motors Corp. (which will do most of the tooling for the subcontracting work), all of Detroit, and to Fleetwings Inc., Bristol, Pa.; Goodyear Aircraft Corp., Akron, Ohio; McDonnell Aircraft Corp., Robertson, Mo., and Aircraft Mechanics Inc., Colorado Springs, Colo.

Large orders are also slated for Solar Aircraft, San Diego; Hammond Aircraft, South San Francisco; Hardman Aircraft Products Inc., Southgate; Axelson Manufacturing Co., Los Angeles, and Vega Airplane Co., Burbank.

"All parts and subassemblies manufactured in the east will be shipped to the new Douglas plant at Long Beach,

Cal., where complete airplanes will be assembled and turned over to the Army and Navy under the accelerated defense program," Douglas announced. "All of the companies listed have the machinery and trained personnel to plunge into mass production and rapidly build entire sections of bombers, cargo transports and observation aircraft."

The subcontracts will create 12,000 additional jobs for a period of two years, and may eventually exceed \$100,000,000, the company said.

A staff of 25 Douglas engineers, inspectors and experts, with headquarters in eastern centers, will coordinate the outside production. Directing the forces in the field will be Fred Essig and Fred Rockelman, liaison executives.

"To save time and transportation expense, 50 specially designed railroad box cars with built-in racks will be shuttled across the continent between the plants of the subcontractors and the Long Beach factory," Douglas said.

## Canada Plane Supply Increased by 645 In 3-Month Period

A total of 645 airplanes of various types has been made available for Canadian use in the last three months, including 59 delivered from the U. S., but excluding production of Canadian Associated Aircraft Ltd., C. D. Howe, minister of Munitions and Supply, reported on Oct. 16. In addition to the U. S. craft, the statement indicated that during the quarter 272 planes had been built and 176 assembled by Canadian industry, while 138 were assembled by RCAF.

Employment in the aircraft industry, Howe said, increased 40%, about 11,000 persons now being employed in aircraft and engine plants, overhaul depots, and as part of the Anson program. Plant expansion costing \$3,000,000 is underway to produce planes for the Joint Air Training Plan, and planes are being prepared for two new plants at \$2,500,000 cost for construction and overhaul of aircraft, Howe stated, adding that his department aims to develop Canadian sources for manufacture of all aircraft components. Negotiations were said to be completed for production in Canada of propellers, instruments, tires, electrical equipment, bomb sights and other parts formerly unobtainable in the Dominion.



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### O-49's, B-17C's Delivered

Delivery of the first Stinson O-49's and the first of the B-17C Flying Fortress to the Air Corps at Wright Field has been announced by the War Dept.

### Specialist

W. E. Greenwood, president of Pilot Propellers Inc. in Los Angeles, plans to produce a special propeller for each new type of airplane now going into production for Army use in an attempt to increase efficiency of planes.



Greenwood

### Lockheed Trains Personnel to Forestall Skill Shortage

Latest step in a plant-wide training program to overcome current shortage of skilled workers was marked when 4,000 employees of Lockheed Aircraft Corp. and its subsidiary, Vega Airplane Co., returned to school in mid-September, attending approximately 100 trade extension courses offered two nights weekly at three high schools, Hockaday Aircraft Corp. and the Lockheed factory, all of Burbank, Cal. The courses, spread over 18 weeks, include instruction in every phase of aircraft construction and are conducted by experienced Lockheed personnel.

Most of the 3,000 men who attended the short summer course concluded at the end of August have re-enrolled in classes now underway. In addition to the trade extension program, some 1,500 men are taking special training within the Lockheed plant, while 120 experienced engineers recruited from other industries are completing a streamlined 16-week aeronautical course started at California Institute of Technology in July. Combined payroll of Lockheed and Vega is in excess of 13,000.

### Mascuch Petition Denied

Petition for certiorari of Joseph J. Mascuch, former president of Breeze Corps, Inc. convicted in Nov. 1939, of perjury committed before the SEC (AMERICAN AVIATION, Dec. 15, 1939, p. 26), has been denied by the U. S. Supreme Court, according to SEC and Dept. of Justice announcement of Oct. 15. Mascuch was sentenced to two years imprisonment and fined \$4,000.

### Grismer, Ragland Named

Hardman Aircraft Products Inc., Los Angeles, has announced the appointment to the executive staff of Lee Grismer and Russell R. Ragland. Grismer, a veteran in the aviation field, formerly was purchasing agent for Harlow Aircraft Co. Ragland assumes the position of treasurer and chief accountant. He has had experience with Douglas and Lockheed.

### Government and Private Aircraft Orders

#### Go to Wright Aero, Northrop and Beech

The War Dept. on Oct. 11 announced that contracts totaling \$81,569,140.61 for engines have been cleared by the National Defense Advisory Commission, and awarded to Wright Aeronautical Corp., Paterson, N. J.

Part of the order is allocated to the Navy, under the policy announced by the War Dept. on Aug. 30.

Northrop Aircraft Inc., Hawthorne, Cal., earlier announced receipt of a \$4,000,000 contract from an unnamed source, increasing the company's backlog to \$24,000,000.

Types of planes to be manufactured under the new order were not revealed

### American Eastern Company Opens Offices in New York

Marcel E.



Wagner

Wagner, managing director of the well-known Near Eastern firm, American Eastern Co., S.A.E., of Alexandria, Egypt, which has played a prominent role in introducing American - built planes and aviation products in the Near East, has returned to the U. S. and has opened offices in the International Bldg., 630 5th Ave., New York. Wagner's organization has been representing such American firms in the Near East as Curtiss-Wright Corp., Bendix Aviation Corp. and Fairchild Aviation Corp. and is contemplating expanding its sales activities to Latin America.

### Graff Heads Vega Dept.

Appointment of Otto P. Graff as manager of parts sales and customer service has been announced by Vega Airplane Co., Burbank, Cal. With Lockheed Aircraft, of which Vega is a subsidiary, since 1936, Graff has been a sales executive and test pilot.

### Latin American Distributor Named

American Steel Export Co. Inc., with offices throughout Central and South America, has been appointed export representative for Luscombe airplanes in Argentina, Bolivia, Chile, Paraguay and Uruguay. Main office of the company is at 347 Madison Ave., New York.

### PARKS TRAINED MEN ARE EQUIPPED TO RISE TO LEADERSHIP

Graduates of Parks Air College have had two full years of intensive training. They have met Parks' strict requirements for admission as well as graduation.

During their terms at Parks they have acquired far more than necessary technical skills. They have been trained not only how to do certain things, but why such things are necessary. Each has had a broad, comprehensive education in basic principles; has developed his own capacities for resourceful, independent thinking.

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## Plant Expansion, Production

# Expansion Contracts Cleared for 4 Firms; Several Companies Buy Existing Factories

Boeing, Stearman, Bell and Beech Benefit From Emergency Plant Facility Agreement; Curtiss Acquires Land Through RFC; Martin Draws Plans for 1,200,000 Sq. Ft.

**A**WARDS of contracts for plant expansion cleared through the National Defense Advisory Commission and acquisition of land through the Defense Plant Corporation, a subsidiary of RFC, predominated among news items concerning aircraft, engine, propeller and accessory manufacturers who are continually enlarging facilities to keep pace with the national defense program.

Boeing Airplane Co. at Seattle, Wash., and Boeing's Stearman Aircraft Division at Wichita, Kan., received contracts cleared through the NDAC calling for plant expansion construction at Seattle to cost \$7,368,849.13 and at Wichita to cost \$3,367,943.22.

The War Dept. announced on Oct. 16 the award of contracts cleared through the NDAC to Bell Aircraft Corp. calling for plant expansion at Wheatfield Township, Niagara County, N. Y., to cost \$1,023,200, and to Beech Aircraft Corp. calling for plant expansion at Wichita to cost \$1,619,508.55.

The new facilities will be constructed under the terms of the Emergency Plant Facility contracts developed jointly by the NDAC, the War Dept., the Navy Dept. and the Treasury Dept. The company in each case will furnish the funds for construction. Under the

contract, the government will repay the cost of the plant expansion over a period of five years.

The Defense Plant Corporation recently acquired title to approximately 124 acres of land adjoining Buffalo, N. Y., Municipal Airport on which Curtiss-Wright Corp. will construct a 1,100,000 sq. ft. factory for mass production of fighting aircraft. Arrangements have been made by C-W to borrow funds from the RFC to finance erection and equipment of the new plant.

## NORTHROP

Northrop Aircraft's general manager and chairman of the board, La Motte T. Cohn, announced in mid-October that the million dollar expansion program now under way will not require additional financing or the borrowing of capital.

New Northrop construction includes a building for fabrication and additional assembly space of 200,000 sq. ft., a warehouse of 22,400 sq. ft., an addition to the hammer house of 21,000 sq. ft. and a personnel department building of 2,400 sq. ft. Mezzanine floors for sub-assembly will also add another 40,500 sq. ft. When the program is complete, Northrop will have about 500,000 sq. ft. of manufacturing area.

## BENDIX

Bendix Aviation Corp. has purchased plants at Wayne, Mich., and Philadelphia, adding approximately 905,000 sq. ft. to its total floor space. The Wayne plant formerly was occupied by Graham Paige; the Philadelphia plant by Atwater-Kent Manufacturing Co.

The Wayne plant has an area of

265,000 sq. ft. and 40 acres of ground. Purchase price was reported above \$300,000. Eventually employment will be given to about 1,500 men but operations are not expected to start for several weeks.

The Philadelphia property was known as Plant No. 6 of the Atwater-Kent organization and has been idle since 1932. It contains 640,000 sq. ft. of space. Purchase price involved the expenditure of approximately \$3,500,000.

## PESCO

Manufacturing space of Pump Engineering Service Corp. at Cleveland, O., has been doubled through the purchase of a five-story structure acquired from National Properties Co. at a reported price between \$150,000 and \$160,000.

About 330 PESCO employees are manufacturing pumps and hydraulic equipment for the aviation industry.

## HAMILTON STANDARD

Hamilton Standard Propellers Division of United Aircraft Corp. announced on Oct. 18 that it had leased the entire plant of Lorraine Manufacturing Co., Pawcatuck, Conn., for a period of two years, with a two-year option.

New space will give Hamilton Standard some 200,000 sq. ft. of additional factory space which will be devoted to manufacture and assembly, as well as the training of personnel in blade manufacture.

Approximately 1,000 new workers will eventually be employed at the Pawcatuck plant.

Many of the parts required for Hamilton Standard propellers assembled at the new plant will be manufactured by various sub-contractors in other parts of the country.

Operations at the new factory will begin shortly after the first of the year.

## MARTIN

It was learned in mid-October that Glenn L. Martin Co. of Baltimore was drawing plans for a new factory to contain more than 1,200,000 sq. ft. of floor

space. This would be about as big as the present plant, and would employ initially about 16,000.

## EDO

Edo Aircraft Corp. of College Point, N. Y., expects to begin construction soon on a new plant which will double present facilities. The addition will consist of a two-story building and mezzanine, containing 50,000 sq. ft. of floor area on a plot 100 by 200 ft. This marks the third enlargement of the company's production capacity since the fall of 1939.

## UNIVERSAL

Universal Aircraft Co. at 1010 2d Ave., Seattle, Wash., plans the expenditure of \$100,000 for the construction of an aircraft manufacturing plant in Deer Park, Spokane, Wash., it was learned on Oct. 16.

## ROMEC

Romec Pump Co. of Elyria, O., manufacturers of pumps for aircraft, has increased its floor space 150% and will be shipping by March more than double its capacity when it was reorganized in July.

Company's present backlog is about eight months at the present rate of shipment, but "deliveries are made without fail and orders are being taken for almost immediate delivery," according to Paul E. Ryan, president.

## LEACH RELAY

Leach Relay Co., Los Angeles manufacturer of electrical equipment for the aircraft and other industries, recently started construction of a new building at 5915 Avalon Blvd. New factory is to have a frontage of 138 ft. and a depth of 124 ft.

## AIRCRAFT TOOLS

Ground was broken recently for the new Los Angeles factory of Aircraft Tools Inc., exclusive manufacturer of small tools for the aviation industry. This marks the fourth expansion move of this company, and will triple factory space available.

The business and manufacturing facilities of Aeronautical Tool and Die Corp., recently acquired by Aircraft Tools Inc., will also be housed in the new factory.

## PACIFIC AIRMOTIVE

Pacific Airmotive, division of Airplane Manufacturing and Supply Co. at Burbank, Cal., has announced expansion of present facilities and establishment of two new distribution bases at Oakland, Cal., and Roosevelt Field, L. I., N. Y.

At the latter port, the company leased Hangar No. 20 as sales office and warehouse to open Nov. 1. At Burbank, the firm has expanded the engine overhaul shop to 4,700 sq. ft. to permit "production line" maintenance. The airplane repair division was enlarged to 5,000 sq. ft. and a propeller overhaul shop was brought to another 5,000 sq. ft.

## VULTEE

A new airfield runway, 4,000 ft. n/s, is being planned by Vultee Aircraft Inc. at Downey, Cal., through acquisition of an additional 30-acre tract of land adjoining the present factory site on the south.

## Piper

During the first nine months of 1940, Piper Aircraft Corp. at Lock Haven, Pa., manufactured over 2,000 Cubs, a record never before equalled by any manufacturer of either military or commercial aircraft. W. T. Piper, president, predicted that 3,100 Cubs would be made for the entire year of 1940. Present rate of production is averaging 100 Cubs per week, but this figure will soon be materially increased when two new assembly buildings are in use.

## Pratt & Whitney

Production of Pratt & Whitney engines, including spares, was 893 in August and 829 in September, Frederick B. Rentzschler, chairman of the board of United Aircraft Corp., revealed in mid-October. He added that this represented a rate of approximately 850,000 horsepower per month, and that this rate of production would be doubled by July, 1941.

## Adel Precision

Signed orders for hydraulic equipment in the amount of \$125,000 received recently by Adel Precision Products Corp., Burbank, Cal., brings the company's backlog to \$450,000, according to H. Ray Ellinwood, president.

## Boeing Expands at Wichita



Architects' sketch of the new plant of Stearman Aircraft Division of Boeing Airplane Co. to be built at Wichita, Kan. Measuring 330 by 1,000 ft. and comprising 442,000 sq. ft. of floor area, it will be used to augment Boeing's Seattle plants. It will be a complete new plant, separate from Stearman's existing plant at Wichita which is also being enlarged for increased production of Stearman primary trainers. New factory will be engineered and built by Austin Co.

## Flying Fortress Factory-to-Be



An artist's perspective drawing of Boeing Aircraft Co.'s Plant No. 2 in Seattle as it will look in a few months from now. One of the largest single factory buildings of its type in the nation, it will measure a quarter of a mile long by a fifth of a mile wide, and will contain more than 42 acres of floor space. At present, Plant No. 2 is approximately half this size. Four months ago it was less than one-tenth the size shown here. This factory, along with other plants of the company, is to be devoted mainly to the production of four-engine Boeing Flying Fortresses. This expansion will increase Boeing's total floor space in Seattle and Wichita from 1,635,000 sq. ft. to 3,235,000 sq. ft.



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## Bell's Niagara Falls Development



Construction of Bell Aircraft Corp.'s new \$1,050,000 aircraft assembly plant at Niagara Falls, N. Y., Airport was started early in October by the Austin Co., designers, and is scheduled for completion in 115 working days. New building will provide approximately 300,000 sq. ft. of floor space, where a force of 3,000 men in three eight-hour shifts will assemble Airacobra interceptor pursuits for the Army. Four parallel assembly lines will be set up

in two 100-ft. bays, 600 ft. long, and with 30-ft. clearance below the roof trusses.

Two thousand tons of structural steel will be required for the new plant, first to be erected at Niagara Falls Airport, where Bell has acquired a 58-acre site.

General offices of the company will remain at the Buffalo plant, where floor space is being increased to 435 sq. ft.

## Allison

Production of aircraft engines at the Allison Engineering Division of General Motors Corp. at Indianapolis, Ind., reached a figure exceeding 200 in September. Employment now stands at 9,000.

## Waco

Waco Aircraft Co. at Troy, O., is operating at peak production of 21 planes a week, officials reported on Oct. 15. The company at that time had turned out 146 trainers for the CAA.

## Fairchild Aircraft

Fairchild Aircraft Division of Fairchild Engine & Airplane Corp. at Hagerstown, Md., has purchased land adjacent to the municipal airport in anticipation of an expansion program which is now under consideration.

## Hardman Aircraft

Hardman Aircraft Products Inc. has announced completion of its new plant at South Gate, Cal., occupying 60,000 sq. ft. of floor space as against 9,000 in the old plant.

Organized about a year ago with 10 employees, the company has 200 on the payroll at present.

## Canada Lists Orders

Total orders placed by the Canadian government for defense purposes since the beginning of the war reached \$34,631,892 by the end of September, according to C. D. Howe, minister of munitions and supply.

Approximately 86 percent of the orders have been placed with Canadian firms, nine percent with British, and five percent with U. S. industry.

## Waterbury Succeeds Frye As Consair Personnel Chief

J. H. Waterbury, former assistant personnel director of Consolidated Aircraft Corp., San Diego, Cal., has been promoted to the position of personnel director, succeeding Don Frye who resigned to develop a new lightplane. Frye is a brother of TWA's president, Jack Frye.



Waterbury

## Northrop Installs New Furnaces

Northrop Aircraft Inc. has announced the development of a new, fast, heat treatment furnace for formed aluminum parts which cuts production time two-thirds. Two of the new furnaces are now in operation at Northrop and another is being installed.

## Mockup of New Manta Fighter Nearly Finished

Mockup of the long-range fighter of Manta Aircraft Corp. is nearing completion and the prototype is well under way.

The Manta firm, which was organized in Los Angeles last June to produce a combat plane designed by David R. Davis, one-time partner of Donald Douglas, reports its fighter to have a range of more than 3,000 miles, a speed exceeding 400 mph., and heavy armament including cannon. Plans call for a 1,000-hp. Allison engine to be located behind the pilot's compartment.

Officers of the company include John P. Davies, president; Davis, vice-president; J. Norman Phillips, secretary-treasurer, and William J. Waterhouse, chief engineer.

## Brazil Orders 4 Lockheeds

Brazil has placed a \$325,000 order with Lockheed Aircraft Corp. for four army transports, including spare parts and special equipment. First of the planes will be delivered within 90 days and the others will be shipped to Rio de Janeiro within six weeks thereafter. Contract is third in three years received by Lockheed from Brazil.

## North American's Texas Development



Perspective drawing of the new factory being erected at Hensley Field, near Dallas, Tex., by North American Aviation Inc. of Texas to augment North American Aviation Inc.'s plant at Ingleside, Cal.

## Training Program for 8,000 Started by Republic Aviation

Immediate training of 8,000 new aircraft workmen at a cost of \$1,000,000 was announced Oct. 15 by Republic Aviation Corp., recipient of Army orders exceeding \$80,000,000 for pursuit interceptors. Employing the facilities of Faust Aircraft School, Jericho, N. Y., to train 1,000 men monthly, Republic expects to have personnel ready for its new 1,200,000 sq. ft. plant at Farmingdale which is scheduled for occupancy after Jan. 1. The instruction courses require from four to 12 weeks, depending on type of work assigned.

When current expansion is completed, Republic will have enlarged its facilities from 228,000 sq. ft. to more than 1,500,000, and quadrupled its payroll from 2,500 to more than 10,000 persons.

## Flying Service Purchased

Don Hood and George Galipeau of Northampton, Mass., have bought the Whitman-Shaw flying service at the Turners Falls, Mass., airport. They are planning to organize flying clubs as well as maintain the flying service at the airport.

## Lockheed and Vega Under New Set Up for Joint Management

Under a newly organized joint management set up, chief responsibility for plant production of Lockheed Aircraft Corp. and its subsidiary, Vega Airplane Co., is centered in a committee composed of executives of both firms. While there is no change in the management of the respective companies—Robert E. Gross remains as president of Lockheed and Courtlandt S. Gross as president of Vega—chief responsibility for plant production is centered in a committee composed of executives of both firms.

Production departments, comprising about 90% of the activity of the companies, are under the supervision of R. A. Von Hake, vice-president in charge of manufacturing, who has been with Lockheed for 12 years.

Assisting Von Hake is H. E. Ryker, who joined Lockheed in 1938.

Administrative assistants under the new plan include D. J. Haughton, coordinator; H. J. Lovely, supervising inspector; John H. Hanson, plant protection director; B. B. Irwin, industrial relations director; C. F. Nielsen, general traffic manager, and G. W. Carr, material supervisor.

Works managers for the two companies are John H. Sreenan (Lockheed) and George H. Prudden (Vega). H. C. Christen and C. A. Mulligan will be assistant works managers for Lockheed and Vega respectively.

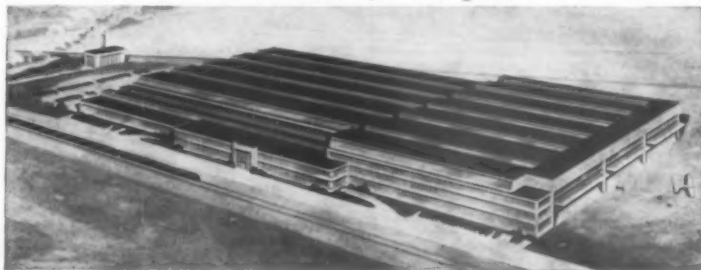
## Tafe Will Manage Vultee's New Nashville Factory

Harvey C. Tafe, former assistant to the president and assistant secretary of North American Aviation Inc., Inglewood, Cal., has accepted the management of Vultee Aircraft's new Nashville, Tenn., factory, it was learned early in October.

## Lavelle Leaves Fleetwings

Thomas Lavelle, factory manager of Fleetwings Inc., has severed his connection with the company and expects shortly to ally himself with another unit of the industry. He has been associated with Fleetwings for the last eight years, serving in various capacities from bench mechanic to factory manager.

## For Mass Production of Fighters



A drawing of the large, one-story, brick and steel plant which Curtiss-Wright Corp. announced it will build on a 124-acre tract adjacent to Municipal Airport at Buffalo, N. Y., for the mass production of Curtiss fighting planes. Designed as a model plant for high-speed aircraft production, the new factory will comprise 1,100,000 sq. ft. of floor area. The announcement followed acquisition of the site for C-W by the Defense Plant Corporation, a subsidiary of the RFC.

Negotiations are under way for obtaining sites for similar aircraft manufacturing plants to be built in Columbus, O., and St. Louis, Mo., by Curtiss-Wright. All of the corporation's plants located at Buffalo and the two above cities will come under the direct supervision of Burdette S. Wright.

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## North American Shifts Personnel to Operate Texas Plant



A general reorganization of supervisory and executive personnel, made necessary by expansion of facilities, was announced on Oct. 15 by J. H. Kindelberger, president and managing director of North American Aviation Inc. Many of the changes and advancements are directly traceable to the appointment of men from the Inglewood, Cal., plant to supervise work in the new factory being erected by NA at Hensley Field near Dallas, Tex.

Changes in the Inglewood organization announced by Kindelberger follow, from left to right:

J. STANLEY SMITHSON, formerly factory manager, appointed works manager.

ROBERT McCULLOCH, formerly factory superintendent, appointed factory manager.



Additional personnel changes and advancements announced by North American include the following executives of the Texas organization, from left to right: ELMER J. RIVERS, formerly assistant superintendent, appointed factory manager of the Texas plant.

ALEXANDER T. BURTON, formerly in charge of assembly and flight test in England, appointed divisional manager in charge of the Texas plant.

CHARLES E. KINDELBERGER, formerly general foreman of final assembly

HAROLD F. SCHWEDES, formerly assistant superintendent, appointed production manager.

RALPH H. RUUD, formerly in charge of tool design, appointed assistant superintendent.

HERMAN V. SCHWALENBERG, formerly foreman of loft, appointed assistant superintendent.

NOBLE SHROPSHIRE, formerly executive engineer, appointed contract administrator.

HAROLD R. RAYNOR, formerly engineer in charge of weight control, now in charge of export sales and service.

JOSEPH B. MEYSER, formerly chief clerk of engineering department, appointed assistant contract administrator.



appointed assistant superintendent for the Texas factory.

KENNETH F. BOWEN, formerly project engineer, appointed production manager for the Texas unit.

WALTER C. SMETON, formerly general foreman of wing assembly, appointed assistant superintendent for the Texas factory.

RONALD L. BURLA, formerly in the export division, appointed assistant to the president and assistant secretary.

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### McGuire Leaves Lear To Head Instrument Co.

Roy McGuire, former central district sales manager for Lear Avia Inc., has resigned that position to assume the presidency of Instrument Design Inc. with headquarters at 3001 Salem Ave., Dayton, O.



McGuire

The device, which will be known as the McGuire Safety Pilot, has been thoroughly tested over a period of 2,000 flying hours, according to company release. It has been installed in various types of aircraft and has been found to have exceptionally smooth correction facilities.

McGuire has said that negotiations will begin with various aircraft manufacturers and a limited number of manufacturing licenses will be granted.

### Northrop Promotes 7 To Step Up Production

La Motte T. Cobu, chairman of the board of Northrop Aircraft Inc., has announced that the stepping up of production to take care of a \$24,000,000 backlog has resulted in the promotion of several key men. Those promoted include:

Paul Bruckner, former shop superintendent, to factory manager; Robert Catlin, former assistant superintendent, to superintendent of experimental; Ernest Lawson, to superintendent of production; Richard Nolan, to superintendent of tooling; O. B. Spencer, to night superintendent; George West to night assistant superintendent, and Thomas Quayle to engineering supervisor.

### Marks Will Supervise Packard Construction

M. M. Gilman, president of Packard Motor Car Co., has announced the appointment of J. H. Marks as vice-president in charge of procurement, machinery and accessories.

Marks, who has been purchasing manager for Packard since 1925, will supervise construction and equipping of new buildings for the manufacture of 9,000 Rolls Royce aircraft engines for the United States and Great Britain.

#### Librascope Names Two

Librascope Inc., Burbank, Cal., has announced the appointment of F. W. Thrane, former president of Precision Industries Inc., as general manager; and Edward C. Flynn, former president of the Air Conditioning and Refrigeration Assn. of Southern California, as sales manager.

#### Theobald Named V. Pres.

Election of George A. Theobald as vice president and general manager of Aircraft Accessories Corp., Glendale, Cal., has been announced by the directors of the firm.

### Shays, McMurtrie in New Republic Aviation Jobs

Appointment of Philip R. Shays as personnel director and Stanley E. McMurtrie as employment manager of Republic Aviation Corp. was announced on Oct. 21 by Joseph L. McCane, vice-president and general manager.



Shays

Shays formerly directed both the employment and personnel functions of the company, while McMurtrie was supervisor of the fuselage department. Both have been with the firm for a number of years.  
McMurtrie was a wartime pilot and has been associated with Keystone Aircraft, Glenn L. Martin Co., North American and Grumman. He has been an instructor in aviation trades at New York Technical School.  
Shays served with the U. S. Navy and was employed by Fairchild Aviation as personnel work before joining the present Republic organization in 1935.

### Pesco Appoints Three



Pump Engineering Service Corp. of Cleveland has announced the appointment of Frank Clewers (left) as service manager; Mike Phillips (center) as assistant chief engineer, and Karl Dittman (right) sales engineer. Clewers formerly was service engineer and assistant to the sales manager. He went to Pesco in Dec. 1938 from Boston-Maine Airways. Phillips has been serving as engineer in charge of hydraulics since going to Pesco from Glenn L. Martin Co. in Sept. 1938. Dittman, who joined Pesco in Jan. 1939, formerly was in charge of service.

## GOVERNMENT CONTRACTS

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## AIRCRAFT

St. Louis Airplane Div., Curtiss-Wright Corp., Robertson, Mo., 10/10, airplanes, \$2,674,566 (Navy).

## ENGINES, PARTS, ACCESSORIES

Meyers Construction Co., San Francisco, Cal., 8/22, temporary housing, Stockton Airport, Cal., \$364,756 (War).

Boony-Vacuum Oil Co. Inc., New York, N. Y., 8/22, engine fuel, \$41,930 (indef. contract), (Air Corps).

Variety Aircraft Corp., Dayton, O., 8/22, stand assemblies, \$177,500 (Air Corps).

Aluminum Company of America, Washington, D. C., 8/22, aluminum alloy, \$60,500 (Navy).

International Telephone Development Co. Inc., New York, N. Y., 8/22 landing systems, \$537,547 (CAA).

Farnsworth Television &amp; Radio Corp., Fort Wayne, Ind., 8/22, fan marker equipment, \$170,787 (CAA).

Julien P. Friez &amp; Sons Div., Bendix Aviation Corp., Baltimore, Md., 8/23, radio sound equipment, \$67,893 (Navy).

Jaeger Watch Co. Inc., New York, N. Y., 8/23, aircraft time clocks, \$115,407 (Navy).

N. M. Ball Sons, Berkeley, Cal., 8/23, aprons and drainage, Moffet Field, Cal., \$46,900 (War).

T. E. Ritter Co., Norfolk, Va., 8/26, reinforced concrete runways, Langley Field, Va., \$268,710 (War).

Barrett &amp; Hilt, San Francisco, Cal., 8/26, spur tracts, Camp Ord, Cal., \$34,598 (War).

American Gas &amp; Accumulator Co., Elizabeth, N. J., 8/27, lighting units, \$93,405 (Navy).

Switlik Parachute &amp; Equipment Co., Trenton, N. J., 8/30, aviators jackets and suits, \$45,772 (Navy).

Bernard Aviation Equipment Co. Inc., Ashley, Pa., 8/30, camera mount assemblies, \$44,454 (Air Corps).

Kollman Instrument Div., Square D Co., Elmhurst, N. J., 9/3, magnetic compasses, \$57,000 (Navy).

A. J. Rife Construction Co., Dallas, Tex., 9/5, southeast air depot, \$1,350,000 (War).

Shell Oil Co., San Juan, P. R., 9/6, fuel oil and aviation gasoline, \$42,350 (Navy).

F. L. Bray Construction Co., Oklahoma City, Okla., 9/6, officers quarters, Southeast Air Depot, Mobile, Ala., \$60,208 (War).

Bendix Radio Corp., Baltimore, Md., 9/6, radio equipment and transmitters, \$296,383 (CAA).

C. L. Browning Jr., San Antonio, Tex., 9/9, recruit reception center, Ft. Sam Houston, Tex., \$232,575 (War).

McCarthy Brothers Construction Co., St. Louis, Mo., 9/9, barracks, Howard Field, C. Z., \$353,470 (War).

Hill &amp; Combs, San Antonio, Tex., 9/9, temporary buildings, advanced flying field, San Angelo, Tex., \$397,400 (War).

Warwick Mills, New York, N. Y., 9/10, mercerized cotton airplane cloth, \$107,730 (Air Corps).

Wellington Mills Inc., New York, N. Y., 9/10, mercerized cotton airplane cloth, \$214,132 (Air Corps).

Suncoot Mills, Suncoot, N. J., 9/10, mercerized cotton airplane cloth, \$136,059 (Air Corps).

D. E. Mallory &amp; Co. Inc., Indianapolis, Ind., 9/10, bomb-release control assemblies, \$86,400 (Air Corps).

Duplan Silk Corp., New York, N. Y., 9/10, parachute silk, \$304,818 (Air Corps).

Schwarzenbach Huber Co., New York, N. Y., 9/10, parachute silk, \$149,345 (Air Corps).

Cheney Brothers, Manchester, Conn., 9/10, parachute silk, \$156,000 (Air Corps).

Pump Engineering Service Corp., Cleveland, O., 9/10, pump assemblies, \$184,872 (Air Corps).

International Industries Inc., Ann Arbor, Mich., 9/10, telescopic sight assemblies, \$45,947 (Air Corps).

Pump Engineering Service Corp., Cleveland, O., 9/10, pump equipment, etc., \$623,395 (Air Corps).

Chandler-Evans Corp., S. Meriden, Conn., 9/10, pump equipment, etc., \$105,560 (Air Corps).

Thompson Products Inc., Cleveland, O., 9/10, pump equipment, etc., \$105,400 (Air Corps).

Philadelphia Air Transport Co., Norristown, Pa., 9/11, developer assemblies &amp; rollidim dryers, \$124,516 (Air Corps).

Kline Manufacturing Co., Columbus, O., 9/11, tow-target windless assemblies, \$36,250 (Air Corps).

Walter Kidde &amp; Co. Inc., New York, N. Y., 9/11, steel seamless cylinders, \$31,334 (Navy).

Pump Engineering Service Corp., Cleveland, O., 9/11, maintenance parts for pump engineering equipment, \$58,353 (Air Corps).

A. Berney Jones, Montgomery, Ala., 9/11, fire &amp; guard house, Southeast Air Depot, Mobile, Ala., \$63,180 (War).

Minneapolis Honeywell Regulator Co., Philadelphia, Pa., 9/12, floodlight flare stand assemblies, \$45,742 (Air Corps).

American Gas Accumulator Co., Elizabeth, N. J., 9/12, floodlight lamp assemblies, \$474,000 (Air Corps).

Lights Inc., Alhambra, Cal., 9/12, field lighting sets, \$1,291,800 (Air Corps).

Webster Electric Co., Racine, Wis., 9/12, solenoid assemblies, \$65,672 (Air Corps).

Consolidated Machine Tool Corp., Rochester, N. Y., 9/12, engine lathes, \$42,950 (Navy).

Eastman Kodak Co., Rochester, N. Y., 9/12, ground cameras, \$26,846 (Air Corps).

Star Pattern Works, Dayton, O., 9/12, photo-print dryer assemblies, \$31,850 (Air Corps).

Fairchild Aviation Corp., Jamaica, N. Y., 9/12, vertical view-finder assemblies, \$44,756 (Air Corps).

McCarthy Bros. Construction Co., St. Louis, Mo., 9/12, barracks, Howard Field, C. Z., \$353,470 (War).

Hill &amp; Combs, San Antonio, Tex., 9/12, temporary buildings for advanced flying field, San Angelo, Tex., \$397,400 (War).

Triumph Explosives Inc., Elkton, Md., 9/12, aircraft float lights, \$131,859 (Navy).

Watt &amp; Sinclair of Florida, Inc., Palm Beach, Fla., 9/12, temporary buildings, Orlando Municipal Airport, \$253,400 (War).

W. M. Conway, Madison, Wis., 9/12, concrete street pavements, Chanute Field, Rantoul, Ill., \$282,350 (War).

J. C. Boesdug, Miles City, Mont., 9/12, temporary buildings, Chanute Field, Rantoul, Ill., \$1,510,000 (War).

Crouse-Hinds Co., Syracuse, N. Y., 9/13, floodlight lamp assemblies, \$74,443 (Air Corps).

Triumph Explosives Inc., Elkton, Md., 9/13, aircraft engine-starter cartridges, \$75,430 (Navy).

International Flare-Signal Div., Kilgore Manufacturing Co., Tippecanoe City, O., 9/13, aircraft signal flares, \$121,600 (War).

Federal Telegraph Co., Newark, N. J., 9/13, radio equipment, \$288,571 (CAA).

Farnsworth Television &amp; Radio Corp., Fort Wayne, Ind., 9/13, marker equipment, \$235,500 (CAA).

Cone Brothers Contracting Co., Tampa, Fla., 9/13, paved apron, Orlando Airport, Fla., \$77,178 (War).

Washington Asphalt Co., Seattle, Wash., 9/13, paved runway, McChord Field, Wash., \$91,500 (War).

Peter Kewitt, Omaha, Neb., 9/13, temporary buildings, Salt Lake Municipal Airport, Utah, \$79,600 (War).

Jacobson Construction Co., Salt Lake City, Utah, 9/13, Air Corps hangar &amp; utilities, Salt Lake Municipal Airport, Utah, \$117,347 (War).

## Harvill Plant Dedicated



This new 160 by 320 ft. plant of Harvill Aircraft Die Casting Corp. which adjoins Los Angeles Municipal Airport was dedicated recently at which time Col. Joseph L. Stromme, industrial planning officer of the Army Air Corps, acted as toastmaster and principal speaker. New building contains a total of 65,000 sq. ft. and was constructed by the Austin Co. at a cost of \$170,000. In anticipation of night operating, fluorescent lighting equipment was installed.

## Canadian Aviation Awards

Contracts exceeding \$5,000 awarded for aviation supplies by Canadian Dept. of Munitions & Supply during fortnight ended Oct. 4 include Canadian Vickers Ltd., Montreal, Que., \$6,412 and \$17,296; Walter Kidde & Co., Montreal, Que., \$10,193; Noorduy Aviation Ltd., Montreal, Que., \$80,136, \$14,737, \$16,854 and \$5,090; Ontario Hughes-Owens Co. Ltd., Ottawa, Ont., \$18,981; National Steel Car Corp. Ltd., Malton, Ont., \$9,583; Aviation Electric Ltd., Montreal, Que., \$60,506; Canadian Car & Foundry Co. Ltd., Montreal, Que., \$632,205; Dunlop Tire & Rubber Goods Co. Ltd., Toronto, Ont., \$12,954; Standard Tube Co. Ltd., Woodstock, Ont., \$14,651.

## Stainless Steel Aircraft Acquires Factory Space

Stainless Steel Aircraft Corp., newly formed with Jacob K. Hoffman as president, has acquired a factory building in Quakertown, Pa., and is preparing to accept contracts for stainless steel alloy aircraft parts.

The company has a patented universal micro-mitering machine which is said to allow production of interior wing parts out of stainless steel at greatly reduced cost.

General manager of the firm is Paul S. Malwurm; secretary is A. H. Levenknicht.

## NEW YORK STOCK EXCHANGE

	Week Ended Oct. 12			Week Ended Oct. 19		
	High	Low	Net Change	High	Low	Net Change
American Airlines .....	60	57 1/2	- 3/4	4,300	62	59 1/2 + 2 1/2
Aviation Corp. ....	4 1/2	4 1/4	- 1/4	4,800	4 1/2	+ 1/2
Bendix Aviation .....	32	30 3/4	- 1 1/4	6,400	31 1/2	- 1/2
Boeing Airplane .....	16 1/2	15 1/4	- 3/4	5,500	16 1/2	+ 1/2
Consolidated Aircraft .....	22	21 1/2	- 1/2	1,000	22 1/2	+ 1/2
Continental Motors .....	3 1/2	3 1/4	- 1/4	8,200	3 1/2	+ 1/2
Curtiss-Wright .....	7 1/2	7 1/4	- 1/4	15,400	7 1/2	+ 1/2
Curtiss-Wright A .....	27 1/2	26 1/2	- 1 1/2	2,200	28 1/2	+ 1
Douglas Aircraft .....	77 1/2	76 1/2	- 1	2,700	82 1/2	+ 4 1/2
Eastern Air Lines .....	34 1/2	32 1/2	- 2	12,200	35 1/2	+ 1
Ex-Cell-O .....	30 1/2	28 1/2	- 2	2,500	30	- 1/2
Grumman Airc. Eng. ....	17 1/2	16 1/2	- 1	1,500	17 1/2	+ 1/2
Lockheed Aircraft .....	29 1/2	27 1/2	- 2	7,300	29 1/2	+ 1
Glenn L. Martin .....	32	30 1/2	- 1 1/2	5,900	32 1/2	+ 1/2
Natl. Aviation Corp. ....	11	10 1/2	- 1/2	800	11 1/2	+ 1/2
N. American Aviation .....	17 1/2	16 1/2	- 1	5,700	17 1/2	+ 1/2
Pan American Airways .....	16 1/2	15 1/2	- 1	14,200	16 1/2	+ 1/2
Sperry Corp. ....	41 1/2	40 1/2	- 1	4,600	42	+ 1/2
Square D Co. ....	32 1/2	30 1/2	- 2	1,500	34 1/2	+ 2 1/2
Thompson Products .....	34	32 1/2	- 1 1/2	1,600	34	+ 1/2
TWA .....	18 1/2	17 1/2	- 1	4,600	18 1/2	+ 1/2
United Aircraft .....	40 1/2	38	- 2 1/2	7,700	40 1/2	+ 1/2
United Air Lines .....	18 1/2	16 1/2	- 2	16,900	18 1/2	+ 1/2
Wright Aeronautical .....	103	96	- 7	450	100	- 3

## NEW YORK CURB EXCHANGE

	Week Ended Oct. 12			Week Ended Oct. 19		
	High	Low	Net Change	High	Low	Net Change
Aero Supply B .....	5 1/2	5 1/4	- 1/4	1,700	5 1/2	+ 1/2
Air Associates .....	11 1/2	11 1/4	- 1/4	100	11 1/2	+ 1/2
Air Investors .....	21	21	.....	100	2 1/2	+ 1/2
Air Investors cv pf .....	21	21	.....	100	2 1/2	+ 1/2
Aviation & Transp. ....	2 1/2	2 1/4	- 1/4	1,400	2 1/2	+ 1/2
Beech Aircraft .....	5	4 1/2	- 1/2	2,500	5 1/2	+ 1/2
Bell Aircraft .....	21 1/2	18 1/2	- 3	3,800	21 1/2	+ 1/2
Bellanca Aircraft .....	3 1/2	3 1/4	- 1/4	200	4	+ 1/2
Breeze Corp. ....	5 1/2	5 1/4	- 1/4	300	5 1/2	+ 1/2
Brewster Aero .....	10	9 1/2	- 1/2	1,800	10 1/2	+ 1/2
Canadian Colonial .....	6 1/2	6 1/4	- 1/4	1,000	6 1/2	+ 1/2
Fairchild Aviation .....	9 1/2	9	- 1/2	500	9 1/2	+ 1/2
Fairchild Eng. & Air .....	4 1/2	4 1/4	- 1/4	3,500	4 1/2	+ 1/2
Irving Air Chute .....	14	14	.....	200	14	+ 1/2
Penn-Central Airlines .....	16 1/2	15	- 1 1/2	600	16 1/2	+ 1/2
Republic Aviation .....	5 1/2	5	- 1/2	3,900	5 1/2	+ 1/2
Roosevelt Field .....	.....	.....	.....	2 1/2	2 1/2	+ 1/2
Ryan Aeronautical .....	4 1/2	4 1/4	- 1/4	100	.....	.....
Vultee Aircraft .....	9	8 1/2	- 1/2	600	8 1/2	+ 1/2
Waco Aircraft .....	.....	.....	.....	4 1/2	4	+ 1/2
Western Air Express .....	4 1/2	4 1/4	- 1/4	1,400	5	+ 1/2

## Northwest Airlines, Inc.

COMMON STOCK

Descriptive Booklet on Request

## THE MILWAUKEE COMPANY

135 West Wells Street  
MILWAUKEE, WISCONSIN



## Washington Financial Review

### SEC Registrations

#### American Airlines Inc.

Registration statement filed Oct. 31 covers (1) 50,000 cumulative convertible preferred no-par shares, and (2) 100,000 \$10-par common shares, including scrip certificates for fractions, maximum number of shares being reserved for conversion of preferred. Underwriters now listed are Emanuel & Co., Kidder, Peabody & Co., and Lehman Bros., all of New York.

The preferred will be issued as a series of 100,000 such shares authorized by certificate of incorporation as amended Oct. 24, 1940, at which time present \$10-par capital stock will be re-designated as \$10-par common. Proposed maximum offering price of the 50,000 preferred shares is \$105, excluding dividends.

Proceeds from issuance of 2½% installment promissory note of Aug. 27 are reported distributed as follows: (1) Balance due as of Aug. 31 on 13 Douglas planes, \$1,165,776; (2) Deposit in escrow with Chase National Bank as further security for installment promissory note, \$87,500; (3) Reimbursement, in part, of expenditures made from company's working capital, Jan. 1-Aug. 27, 1940, for 19 Douglas planes, \$996,723, or total proceeds \$2,250,000.

Funded debt: (1) 2½% installment promissory note of Aug. 27, due quarterly to July 27, 1945, principal \$2,250,000, to be fully satisfied simultaneously with issuance of the 50,000 preferred shares here registered; (2) 4½% convertible debentures due July 1, 1941, originally \$2,777,812, but reduced by conversion to \$2,500,325 as of Aug. 31, 1940; convertible into common at \$12.50 a share. At Aug. 31 of 1,000,000 \$10-par shares authorized, 361,776 were issued and outstanding, with 13,196 shares reserved for officers and employees. An additional 100,000 shares of common is reserved for preferred.

Holdings: No stockholder at Oct. 1 owned more than 10% of outstanding stock, but Aviation Corp. owned \$2,422,112 principal amount of 5-year, 4½% convertible debentures due July 1, 1941, which if converted would represent 193,769 shares or 34.88% of issued and outstanding common stock.

Equipment: At present, company has ordered, subject to final agreement upon terms, 12 Douglas DC-3 airplanes for delivery in 1941, and has contracted for 30 DC-4 planes for delivery in 1941 and 1942. "The company has made no definite plans as to the source of the remainder of the purchase price of such airplanes."

#### Air Communications Inc.

Statement covers 164,850 common capital shares, \$1-par, to be sold to Northeastern Securities Corp., address not shown, principal underwriters, at \$1.80, and to public at \$2. There is firm commitment for 15,000 shares.

Company, located at 2233 Grand Ave., Kansas City, Mo., was incorporated June 24, 1939, under Missouri charter to develop and manufacture "all types of aircraft radio equipment, including radio transmitters and receivers . . . radio compasses and other navigational aids."

Management: Joseph G. Speer, 6300 Vernon Rd., Merriam, Kan., president, director; Herbert G. Koenig, 6301 Vernon Rd., Merriam, Kan., treasurer, assistant secretary; Earle W. Frost, 235 E. 72nd St., Terrace, Kansas City, Mo., secretary, director; Henry F. Koenig, Sauk City, Wis., director. President and treasurer by 10-year employment contracts of June 29, 1939, as amended, will receive salaries of \$5,200 yearly, each, plus 5% of net proceeds.

Balance sheet at June 30: Assets \$53,821; current \$30,301. Current liabilities \$6,572. Capital stock 100,000 \$1-par common capital shares authorized; reserved for officers at \$1, 50,000 shares; issued and outstanding 50,000 shares. Surplus: capital \$604; operating deficit \$3,355; net deficit \$2,750.

Company expects shortly to apply for increased capitalization to an authorized 320,000 shares.

### Amendments

#### Standard Aircraft Products Inc.

Post-effective amendment to company's registration statement (AMERICAN AVIATION, Sept. 15, p. 32) states 40,000 shares of cumulative convertible preferred and 20,000 common shares have been offered the public in units

of 1 preferred and ½ common at unit price of \$7.55, and that 25,000 additional common shares have been offered the public at 10c. Preferred has \$7.50 par value with dividend of 40c per share.

Underwriting: Issuer has sold to Steelman & Birkins, 60 Broad St., New York, 700 units at \$7.55 flat, with common to be sold by underwriter at 10c with selling commission of 15c. Agreement with this underwriter terminated Oct. 5 and was canceled. Total cash commission paid was \$225 less \$28. Hill, Thompson & Co. Inc., 120 Broadway, New York, underwriters for 38,438 units and 22,500 common shares. There is no firm commitment.

Under date of Sept. 18, issuer extended time within which to exercise option to purchase the 205 outstanding common shares of Gem City Sheet Metal & Mfg. Co., Dayton, O., and make payment of \$10,000 from Oct. 3 to Nov. 1, and payment of balance not later than Dec. 1.

#### Mid-Continent Airlines Inc.

Company will offer its 100,000 shares of common stock at \$5 per share, according to amendment to registration statement (AMERICAN AVIATION, Oct. 15, p. 26) filed Oct. 15.

### Current SEC Reports

#### Grumman Aircraft Engineering Corp.

Firm received \$229,500 net cash proceeds as result of issuance of 25,500 shares \$1-par common stock between Jan. 1 and July 31 upon exercise of 51 stock purchase warrants issued by company. Warrants entitle bearer to purchase as a whole only 500 shares at price of \$9 each on or prior to Sept. 20. Shares outstanding July 31 totaled 506,560 compared with 481,060 on Dec. 31, 1939.

#### Fairchild Aviation Corp.

Promissory notes of Fairchild Aerial Camera Corp., dated Dec. 15, 1939, maturing from July 15, 1940, to Jan. 15, 1943, were paid in full Aug. 30 by Fairchild Aviation. Aerial Camera was merged with Aviation Dec. 29, 1939, latter assuming former's obligations.

#### Menasco Manufacturing Co.

Company reports letter of credit to Manhattan Co. of New York City maturing Mar. 7, 1942, providing for loan of \$150,000 at 4% per annum. Promissory notes dated Aug. 1, 1940, and Sept. 7, 1940, each in amount of \$75,000, have been issued. Funds will be used in partial payment for construction of new plant and administration building at Burbank, Cal.

In accordance with agreement of June 25, 1940, installment note payable to Vega Airplane Co. in principal amount of \$35,358 was issued, with no interest provision, calling for payment installments of \$4,500 or more Jan. 2, 1942, and each July 1 and Jan. 2 thereafter through Jan. 2, 1945, and unpaid balance, if any, July 1, 1945. Note, plus \$5,000 in cash, covers purchase of 9 acres in Burbank, new Menasco plant site.

### Financial Reports

**FAIRCHILD ENGINE & AIRPLANE CORP.**—Official report for six and 12 months ended June 30 shows loss of \$24,540 for former and net profit of \$272,077 for latter period. In first six months of 1940, preparation for production cut output and increased costs. "Government orders now on hand for Army training planes are sufficient to require capacity deliveries for balance of current year and through 1941."

Backlog at Sept. 30: \$15,700,000 against \$1,876,000 Dec. 31.

Balance sheet June 30: Assets \$2,270,153; current \$1,029,890; property, plant and equipment, \$896,718; deferred charges \$498,899. Current liabilities \$441,464. Capital stock, authorized 15,000 no-par preferred, issued 0; \$1-par common authorized 1,500,000, issued and outstanding 1,035,035. Surplus: capital \$487,686; earned (deficit), since Dec. 1, 1936) \$428,892.

Operating statement, first six months: Gross sales \$764,253; airplanes and parts \$741,024; engines and parts \$23,229. Cost of goods sold \$611,702, or

### Exclusive

## Current Figures on Backlogs; Production Areas and Employment

The following exclusive figures have been compiled by the staff of AMERICAN AVIATION ASSOCIATES and were gathered from numerous reliable sources. Backlog figures, in most cases, are official, and others, because of Army or Navy restrictions, are unofficial but are believed to be as accurate and as current as any on record:

Company	Backlog	Production Area Sq. Ft.	Employees
Adel Precision	\$450,000	.....	.....
Beech	22,361,000	184,960	1,128
Bell	65,000,000	430,000	3,500
Bellanca	500,000	70,000	190
Boeing	184,000,000	1,400,000	7,700
Brewster	44,000,000	830,000	3,800
Cessna	11,000,000	225,000	600
Consolidated	235,000,000	1,900,000	12,275
Curtiss Aero	.....	665,000	8,000
C-W St. Louis	.....	.....	1,700
Douglas	350,000,294	1,500,000	18,053
Fairchild Aircraft	9,690,000	97,136	1,120
Fairchild Aviation	5,343,345	.....	.....
Fleetwings	.....	200,000	1,100
Grumman	20,010,818	.....	.....
Kinner Motors	700,000	.....	.....
Lockheed	210,000,000	.....	12,258
Luscombe	100,000	42,000	371
Martin	216,130,000	1,250,000	12,887
Menasco	2,765,000	43,000	.....
Monocoupe	130,000	22,500	35
North American	105,000,000*	740,000	6,545
Northrop	24,117,586	216,280	1,450
Piper	1,000,000	125,000	1,150
Porterfield	.....	52,000	150
Ranger Engines	7,500,000	100,000	380
Republic	68,000,000	228,000	2,600
Ryan	11,400,000	160,000	1,400
Stearman	19,020,211	205,000	1,300
Taylorcraft	372,000	13,468	347
Vega	31,000,000	.....	2,207
Vultee (includes Stinson)	84,700,000	550,000	6,100
Waco	.....	98,960	657
Warner Engines	1,000,000	33,000	140
Wright Aero	225,000,000	2,300,000	13,400

\* Does not include U. S. Govt. order totaling approximately \$111,000,000 on which final approved contracts have not been received.

gross profit \$152,550. Costs and expenses not included in goods sold \$180,823. Net loss from operations \$28,273.

**AERO SUPPLY MFG. CO. INC.**—Nine months ended Sept. 30, net profit of \$312,468, after charges and taxes, 72c per Class B common share after dividend requirements. Net sales were \$2,557,212.

**CONTINENTAL MOTORS CORP.**—Nine months ended July 31, net profit of \$389,138, after depreciation and Federal income taxes, equal to 13c on 3,000,000 common shares. \$1-par. Companies with net loss of \$144,809 for same period last year.

**THOMPSON PRODUCTS INC.**—Net profit, including subsidiaries, for year ended July 31, subject to annual audit and adjustment of \$1,736,940, after depreciation, interest, federal income taxes, etc. Equal, after deducting 12 months dividend requirements on 28,290 shares of \$5 preference stock to \$5.40 on 295,457 common shares. Net profit includes \$45,452 for Canadian subsidiary.

Consolidated income account shows net sales \$20,828,478; costs, expenses, etc., \$18,314,503; operating profit, \$2,513,975; other income \$135,828; total income \$2,649,803; development expense, interest, royalties, etc., \$397,075; federal income taxes \$515,788; provision for depreciation \$348,344.

**NORTHROP AIRCRAFT INC.**—Balance sheet at July 31 shows total assets \$1,763,208; current \$650,615; property, plant and equipment \$824,594; deferred charges \$285,028. Current liabilities \$564,033. Capital: common stock, Class A, \$1-par, \$36,300 shares authorized less 554,004 unissued; common stock, Class B, \$1-par, 163,691 shares authorized less 96,002 unissued. Paid-in surplus \$949,180.

No earnings statement is included in first annual report to stockholders. Report states: "Company broke ground for the construction of its plant Sept. 29, 1939. The plant was ready for occupancy Feb. 15, 1940, and while a substantial amount of business was obtained almost immediately, deliveries did not start until after the close of the fiscal year."

Unfilled orders, Sept. 27, \$20,617,586. **AIRPLANE MFG. & SUPPLY CORP.**—Net profit transferred to surplus for six months ended Aug. 31 was \$32,432. Gross sales \$35,453; cost of sales, \$254,068; gross income from operations \$120,703; operating profit \$46,611; net profit before federal and state income taxes and before amortization of promotion \$47,896. Payroll is 125.

Balance sheet at Aug. 31: Total as-

sets \$496,056; current \$342,456. Current liabilities \$114,447. Capital stock outstanding \$279,800. Surplus: paid-in (premium on capital stock) \$29,686; capital \$1,748; earned \$32,432. New prospectus covers 93,266 \$1-par common shares, principal underwriter G. Brashears & Co., Los Angeles, Cal.

**STINSON AIRCRAFT DIVISION OF AVIATION MFG. CORP.**—Profit and loss figures for seven months to June 30, prior to acquisition by Vultee Aircraft Inc.: Net loss \$260,696; gross sale \$680,677; cost of goods sold \$718,818; selling, general and administrative expenses \$189,634; engineering and experimental expenses \$42,481.

Balance sheet at June 30, unaudited: Total assets \$2,185,593; current \$1,150,508; fixed \$971,086; deferred charges \$88,538. Current liabilities \$471,704. Net worth, due to home office of Aviation Mfg. Corp., \$1,712,608.

**BARLEY-GROW DIVISION OF AVIATION MFG. CORP.**—Balance sheet at June 30, prior to acquisition of division by Vultee Aircraft Inc.: Total assets \$169,593; current \$108,704; fixed \$55,826. Current liabilities \$11,769. Net worth, due to home office of Aviation Mfg. Corp., \$153,813. Net loss for month of June, 1940, period of ownership by Aviation Mfg. Corp., \$13,186.

Vultee Aircraft Inc. will discontinue type of operations previously conducted by Barkley-Grow and will use plant for manufacture of parts for Vultee's Wayne, Mich., factory.

### Application for Listing

**GLENN L. MARTIN CO.**—3,000 common shares, \$1-par, to be registered on New York and Baltimore Stock Exchanges upon notice of issuance. Total of 2,826 shares will be issued between Dec. 25, 1940, and Jan. 1, 1941, to 103 officers and employees on basis of 1 common share for each full year of employment in excess of five years and three shares for each full \$1,000 of the annual salary rate in effect July 30, 1940. Remaining 174 shares registered may yet be allotted. The bonus plan was originated last Christmas and will be continued annually hereafter, when conditions permit.

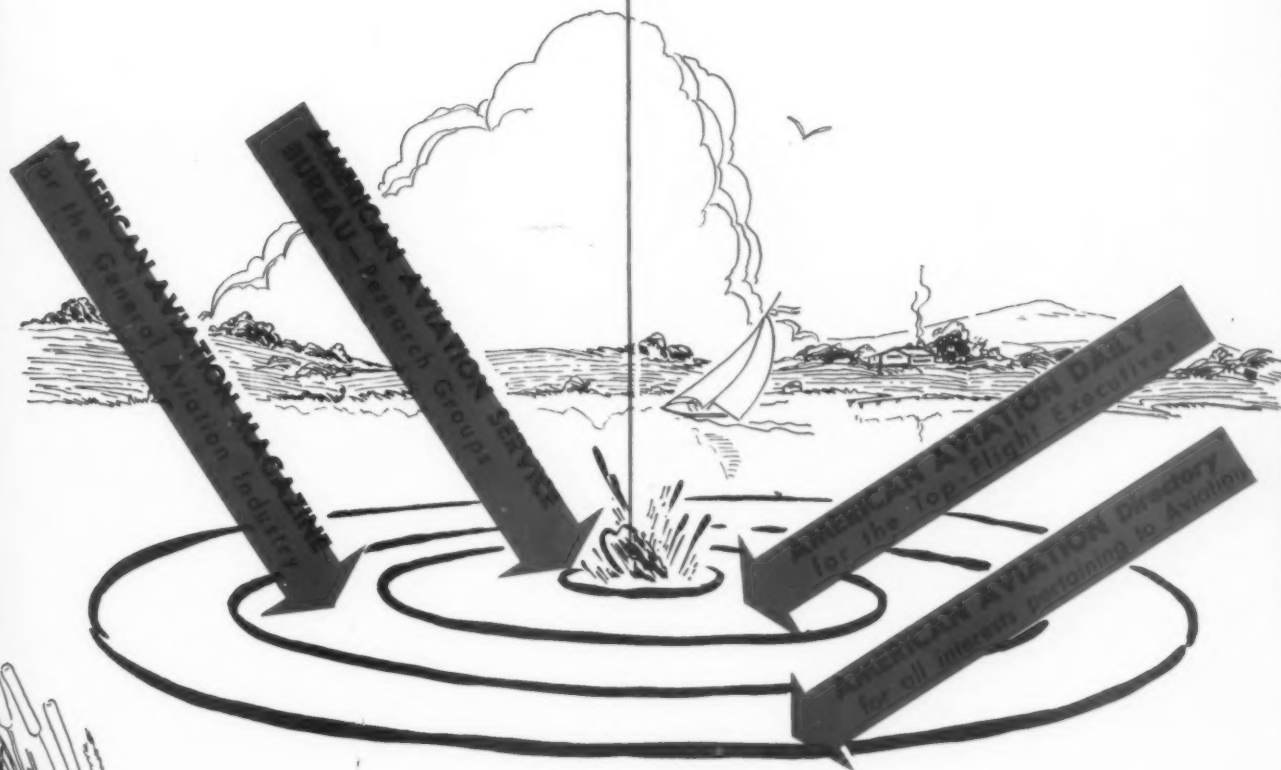
Stock outstanding at Sept. 1, totaled 1,094,532 1/3 common shares, including scrip exchangeable for common shares, authorized 1,500,000. Glenn L. Martin, president, owned of record 337,065 shares or 30.8% voting power.



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**AMERICAN AVIATION ASSOCIATES, Inc.**

EARLE BUILDING

WASHINGTON, D. C.



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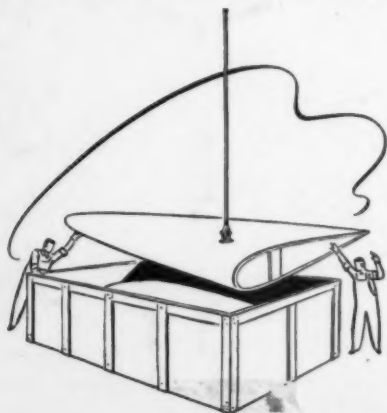
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# THE Lockheed LOG



## IT COSTS MONEY to keep Airplanes on the Ground



That's why Lockheed is constantly expanding its Spare Parts Division ...keeping it abreast of the industry's greater demands. Every advantage gained from experience, has been applied in planning this department...in increasing its efficiency...and its value to owners of Lockheed Airplanes.

Set up as an independent unit, this division stocks a complete inventory of replaceable parts for every Lockheed, from wing panels to cotter pins, sees that these stocks are constantly maintained, and has them ready for shipment to all parts of the world.

This "streamlined" parts service reduces grounded periods to a minimum because Lockheed makes quicker replacements available. Lockheed Aircraft Corporation, Burbank, California, U.S.A.

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